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ORIGINAL LECTURES.

CHRONIC NASAL CATARRH.

Two Clinical Lectures,

Delivered at the College of Physicians and Surgeons, New York.

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LECTURE I.

GENTLEMEN: I propose commencing to-day the consideration of a subject which I know will be of more than passing interest to you. The patients that you see before you will illustrate its various phases; they will be demonstrated in a few moments. My subject is "Nasal Catarrh"—one about which much is written to-day by the profession, much more said by the laity. It is an extensive one, and I cannot hope to treat it exhaustively in the time at my disposal in this course; perhaps it is just as well that I should not attempt to do so. What you most need, as general practitioners, is condensed and reliable information concerning diagnosis, and practical advice in regard to treatment.

I have said that the subject will be of interest to you. We all hear a great deal about "chronic catarrh of the nose," and you will see a good deal of it. Patients who suffer from it, and patients who have not got it, but imagine that they have, will come to you in numbers. You certainly, then, ought to be able to recognize it when present, to exclude it when absent, and, above all, be competent to treat it scientifically and successfully. Let me ask just here, Do general practitioners always recognize it? Do they always examine for it? Are they not too apt, in too many cases, to accept the statement of the patient, make no examination, prescribe a nasal douche and some wash, and allow the patient to disappear, perhaps to excite, in time, a catarrh, where none existed before? Patients will make their own diagnosis—it is common for them to do so—and often come to you for the treatment of that which, perhaps, does not exist; often they will treat themselves, without any advice. The country is flooded with advertisements, pamphlets, and books on the subject of nasal catarrh. The field is a rich one for the quack; "sure cures" multiply rapidly; new remedies are eagerly sought for by the credulous; "catarrh snuffs" crowd the counters of every drug-store; and "nasal douches" are manufactured and sold by the thousand. The quack does not spare the feelings of the patient; he pictures the disease in its most disagreeable aspects; he dwells upon the worst symptoms; he confounds other diseases—syphilis, for instance—with simple catarrh; in short, he frightens.

Your patients, then, well posted in literature of this class, come to you, dreading that the nasal trouble that they have, or, perhaps, have not got, will develop into the worst form of catarrh that they have read about; above all, that it will develop a disagreeable odor.

A symptom that they also often dwell upon, regarding it as a sign of the dread disease, is "a constant dropping of mucus in the throat"—an ever-present desire to clear it. Some little mucus they do bring away; often not. Let me warn you here that, in a good percentage of these cases, all this has nothing to do with "nasal catarrh." The patient is probably suffering from a simple, relaxed throat, or a chronic pharyngitis, in one of its forms; perhaps, and most commonly, a relaxed or elongated uvula, and that these, especially the latter, are the matters at fault, *not* the nose. All this you must prevent, they cry to their doctor; they demand treatment at your hands. Now, much of this nonsense you, as sensible medical men, can prevent. But, first, you must yourself know what "nasal catarrh" really is, what forms it appears under, and how to recognize the varieties by their intra-nasal appearances. The day has gone by when all nasal affections can be recklessly and ignorantly classed under the generic name "catarrh," and so treated. What a multitude of sins that word has covered!

The one symptom that patients most fear, and justly so, I have alluded to—the foul smell from the nose; but it is in reality a rare one; it only occurs in the fetid or atrophic form of nasal catarrh, which is by no means so common as the other varieties, and in ozæna, but ozæna has nothing to do with nasal catarrh. Do not forget this: it only occurs in patients who are the victims of syphilis or struma—patients who have syphilitic necrosis of the nasal bones, with a stinking, purulent discharge, a discharge due to the presence of dead bone. The same thing sometimes happens in scrofulous subjects. Under these circumstances, then, you may have the fetid, stinking disease, ozæna; but only under these circumstances. Do not call cases of nasal catarrh, even the fetid form, ozæna; they have pathologically nothing in common. Remember, also, that fetid or atrophic catarrh is, as I have said, unusual; and thus you are able, at once, to reassure your patient in regard to the most dreaded symptom.

I have said this much in order to prove to you the necessity of your learning to recognize the varieties of nasal catarrhal disease; for not alone diagnosis, but, what is equally important, your correct views regarding the questions of prognosis and treatment, will depend upon your acquirement of this knowledge. Some forms of nasal catarrh are curable, others are not. Is there, then, more than one form of "nasal catarrh?" Most certainly; and you will learn to differentiate them. First, acknowledge the fact that they do exist. You will meet with three varieties: 1. Simple chronic rhinitis; and let me say here that I prefer this term rhinitis to the one—"catarrh"—which is so commonly used; 2. Hypertrophic rhinitis; and 3. Atrophic or fetid rhinitis.

Simple chronic rhinitis is, as the name implies, a chronic inflammation of the nasal mucous membrane unattended by structural changes of any moment—its only symptom is an increased discharge of mucus, or, if

it has lasted some time, muco-pus—this discharge is thin and easily removable, there is no interference with the sense of smell, and no obstruction to respiration. The anterior rhinoscopic examination will show you simply congestion of the mucous membrane, the latter flecked here and there by soft, easily removable, slightly yellowish mucus. As far as the amount of free space is concerned, it is normal, there is no thickening or hypertrophy of the membrane. Posteriorly the rhinoscopic mirror will exhibit about the same appearances, except at the vault of the pharynx, where the glandular tissue is large in amount. Swelling of these glands gives a turgid aspect to the parts, and the secretion which covers them in, in part, is thicker and more tenacious—chronic pharyngitis may or may not coexist. Such patients do not, as a rule, consult you; the trouble is too slight, and unless they are morbidly sensitive or easily frightened, they allow the pathological process, through ignorance of possible results, to continue without treatment. Thus week by week, month by month, it continues, until the simple form of rhinitis develops into the second variety, which we term hypertrophic nasal catarrh, or rhinitis. We now have marked structural changes, a proliferation of all the normal elements of the mucous membrane, a true hypertrophy. The whole mucous membrane of the nasal passages, but specially that over the lower turbinated bones, is markedly thickened and relaxed; the plexus of bloodvessels, a true erectile tissue, which underlies the membrane, in the latter locality, becomes enlarged; the glands at the vault of the pharynx participate in the pathological process and likewise hypertrophy. Secretion is excessive, thick and tenacious, showing that the glandular elements of the mucous membrane have not escaped. Such a hypertrophy of tissue of course occludes more or less, perhaps permanently and completely, but more commonly intermittently and partially, the nasal passages; the patient breathes with difficulty, his voice becomes nasal in character, he experiences much discomfort, and then decides, for the first time, to consult a physician.

Hypertrophic rhinitis, then, will be the form of catarrhal disease of the nose that you will oftenest be called upon to treat. Fortunately, you can give your patient great relief, but of this in one moment. Make now your anterior rhinoscopic inspection. You will see at once that the anterior extremity of the inferior turbinated bone on one, perhaps on both sides of the nose projects far out into the free space of the nasal passage, indeed, may lie against the nasal septum, and thus close the passage, that the mucous membrane covering it is thickened and congested, and hidden more or less by thick, muco-purulent discharge. The thickened membrane over the lower turbinated bone hangs downwards, thus encroaching upon the inferior meatus of the nose. If you touch it with a probe, it indents deeply and recovers itself slowly. The membrane covering the middle turbinated bone and the side of the septum, are affected to a less extent, perhaps not at all. Posteriorly—observe carefully the posterior extremities of both middle and inferior turbinated bones, but specially the latter. The mucous membrane is not only markedly hypertrophied, but has a peculiar rugged appearance; it is thrown into fissures and irregularities, and has a whitish appearance. A veritable tumor is thus formed, characteristic in its ap-

pearance and marked in its results, for it closes, by its bulk, more or less of the posterior nasal opening. This closure is also assisted by the thickening that will be seen in the form of an irregular, ovoid tumor upon the side of the septum. At the vault of the pharynx both mucous membrane and glandular tissue are involved, the latter to the greater extent. Thus we see an irregular, nodular tumor, traversed by seams and fissures, presenting a variety of aspects, according to the degree and kind of development, but always occupying and obliterating the normal, rounded, concave cavity of the vault. Chronic pharyngitis, frequently the follicular form, will also be present, and, occasionally, chronic laryngitis.

As a result of this process of intra-nasal hypertrophy, in certain cases following it, when it has lasted some time, or, more rarely, occurring early in the disease, before hypertrophy is far advanced, the third form of rhinitis develops. This we call atrophic or fetid nasal catarrh. I have told you that it is by no means as common as the preceding varieties. It means this: remember that in the hypertrophic form we had in the deeper layers of the tissues a deposition of newly developed connective and elastic tissue. This may cause two results—first, by its mere presence and amount, it may press upon, cause atrophy of, and destruction of function in, the glands and follicles which stud the mucous membrane. It crowds them to death, so to speak. This may occur, as I have said, early in the disease; if later, as it commonly does, the process of atrophy of the mucous membrane, and especially of the glands, has a different explanation; it is now due to the contraction that takes place in the connective and elastic tissue that has been developed in the hypertrophic form of the disease. The more and more firmly this becomes organized as time goes on, the more and more completely does it compress and destroy the function of the secreting glands and follicles, and with them the mucous membrane in which they lie, and the submucous structures, atrophy. Even more, if the process be long continued, the effect of this continued pressure, aided by the pressure of inspissated secretions or crusts, is exerted upon the turbinated bones themselves. Atrophy, interstitial absorption, is set up in them, they become smaller than normal, and the result is shown in the abnormally large, wide, roomy nasal passages, covered by a tense, dry, shining mucous membrane, often with hard crusts of mucus covering it. In these cases you can often look directly through the nasal passage back into the pharynx, so wide is it.

The symptoms that these pathological changes occasion are not as marked as in the hypertrophic form. There is plenty of room through the nose for the respiratory current to pass, hence there is no obstruction to breathing experienced by the patient. The discharge, instead of being profuse, is scanty, and dries into crusts and scales. There is no interference with the *timbre* of the voice. The only symptoms, then, are interference with the sense of smell, as a rule, the atrophic process having extended upwards to the olfactory region, and affected the terminal fibres of the olfactory nerve, and general uneasy sensations, sometimes amounting to pain, with excessive irritability and sensitiveness to atmospheric changes. The rhinoscopic appearances, both anterior and posterior, are sufficiently indicated, in my description of the disease; I will not, therefore, dwell upon them. The posterior wall of the pharynx will be

dry and shining, and without any enlargement of its follicles.

So much for the atrophic form, but I have coupled with this term the one fetid. The latter condition follows the former closely, indeed, is part of it if it has lasted any time, and I see no need, clinically, to make a distinction between the two. Fetor is the direct result of the atrophy, in this way: The secretions are scanty and tenacious, as I have told you, and become more and more so, as atrophy of successive follicles and glands takes place. The explanation of this is simple: the atrophic process has affected first and chiefly the *serous glands*, which are numerous in the nasal mucous membrane; their function is, by their secretion, to render the nasal mucus thin and watery, but this function being abolished by their destruction, the mucus secreted by the mucous glands, large numbers of which still remain intact, is viscid and tenacious; it adheres to the mucous surfaces, and rapidly desiccates in the respiratory current of air. Large crusts and scabs thus form readily and cling closely in the nasal passages and at the vault of the pharynx. Impacted in the narrowed parts of the canals, pent up beneath the turbinated bones, constantly growing in size by the addition of the secretions poured out beneath them and prevented from escaping, is it any wonder that putrefactive changes set in, that the matter thus imprisoned decomposes, that fetor is established, and not only this, but the irritation of the mucous membrane, caused by the presence of these pent-up purulent discharges, for from muco-purulent to purulent they rapidly change, reinfect the membrane, so to speak, excite further discharge, and thus constantly aggravate the disease.

So passes the atrophic form of rhinitis into the fetid—not always though, fortunately for the patients, and not very rapidly in any case. The symptom of the condition now established may be given in one word: fetor—stinking truly in every sense, disgusting to the patient, disgusting to his friends, disheartening to the physician, who must acknowledge his inability to do more than relieve his patient—cure the condition which gives rise to it he cannot. The only difference, rhinoscopically, which is perceptible between the atrophic and fetid stages of the disease is the increased amount of crusts and yellowish or greenish scabs, and, perhaps, the increased degree of space, due to the atrophy of all the parts upon which they lodge, which is seen in the latter variety.

Let me now recapitulate. We see, clinically, three forms of chronic rhinitis: 1. Simple, uncomplicated, chronic rhinitis; 2. Hypertrophic rhinitis; 3. Atrophic or fetid rhinitis. Certainly, these names and forms must be easy to remember. How important for your success in their treatment and views as to prognosis the remembrance of them and of their different pathological natures is, I have tried to impress upon you. Be sure, then, by means of the direct anterior and posterior rhinoscopic examination of the parts, that I told you, early in the course, how to make, that you know just where your patient stands in the pathological scale.

I turn, now, to a part of my subject which will have, perhaps, a more active interest for you, namely, the *treatment* of chronic rhinitis in its various forms. Here, again, I must limit my remarks. The medical journals teem with advice as to the proper methods of treatment.

Everybody has something to say about the way to manage chronic catarrh of the nose. Much that you read will not commend itself to your good judgment, to put it mildly. Some advice is reliable. I shall try to remember, in what I am about to say, that I am speaking to those who are, or are about to become, general practitioners, and, therefore, will not have at their command the elaborate apparatus, the many instruments, and the varied means of treatment possessed, perhaps, by the specialist, and while I am obliged, in order to make my lecture complete, to allude to all recognized methods, surgical as well as medical, I intend to give you simple rules, by means of which any one of you can treat his cases. You will, of course, understand that I refer to uncomplicated instances of chronic rhinitis. If there coexist in given cases such complications as deflected septum, multiple hypertrophies, nasal polypi, exostoses, and cartilaginous thickenings of the septum, large hypertrophies, veritable tumors of the adenoid tissue at the vault of the pharynx, it is, perhaps, best that you should entrust them to the more skilled hands of those whose special studies and experience fit them to undertake the task.

First of all, let your patient clearly understand whether or no he really has "nasal catarrh;" you may, perhaps, give him much comfort in this way. If he has, make up your mind as to the particular form; upon this depends what you tell him, in the way of prognosis, and what you ought to do in the way of treatment; in any event, let him clearly appreciate the fact that you cannot cure his disease in as many days as he has had it months or years; perhaps, that you cannot cure it at all (in the atrophic or fetid form), but that you can give him much relief from his most urgent symptoms. Honesty is here the best policy. Inform him that he will require some patience, you some regularity in his visits (as a rule, the domestic treatment of chronic disease of the nose is unsuccessful), that there is here no royal road to success, but that, with patience and persistence, much good can be done, that success often, much oftener than is commonly believed, can be attained, and by success I mean complete, permanent, cure.

Now what are you going to do for your patient? First, you are to determine carefully whether any indications exist in the given case for general constitutional treatment, apart from local measures, and they not only often do, but are too often overlooked. If what we term a catarrhal diathesis be present, if scrofula or herpeticism can be proven to exist, in short, if the nasal catarrhal disease depend upon a diathetic condition, general treatment has primary importance. Cod-liver oil, iron, and the iodides, with other remedies that will suggest themselves in particular cases, should be given for long periods. Prophylaxis, likewise, should not be forgotten; the careful attention to all habits which proceed from due consideration of wise hygienic laws will often constitute an important part of the advice that you give to your patient. Bathing, clothing, and temperature, friction and shampooing will, in many instances, be a duty upon which you will insist. The question here arises whether any of the special agents of the pharmacopoeia that have been from time to time recommended as having a useful therapeutic effect upon the mucous membrane of the respiratory passages in a diseased condition are in reality of great value. I believe

that this is questionable. I have made use of many and have never been able to convince myself that any one possessed a decided specific effect. Cubebs, ammoniacum, muriate of ammonium, and perhaps sulphur, have given the best temporary and sometimes permanent results. In each case, however, their use has been associated with that of local and direct treatment of the mucous membrane. In many cases, on the other hand, the affection will appear as a purely local one, and can be met and conquered by local treatment alone. This is of unquestionable value; the means we will consider in our next lecture.

ORIGINAL ARTICLES.

SARCOMA OF SYNOVIAL SHEATHS.¹

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DURING the past four years several cases of disease of the synovial sheaths in the sole of the foot have presented themselves to me, the nature of which I failed to comprehend, and the gravity of which I did not appreciate till the results, which I propose to relate in this paper, afforded the data for a correct judgment as to the nature, and some help at least towards a correct diagnosis, of the affection. The disease which I propose to describe to the Society must, I think, be a rare one, as I have seen only the three cases here recorded, and perhaps the best way of introducing the subject will be to describe the last case which has come under my notice.

CASE I.—A. B., a middle-aged man, apparently in excellent health, presented himself at my office, during the spring of 1883, for advice concerning a swelling which had slowly developed in the sole of his foot. He said that about two years previous he began to suffer aching pain in the part, which he could not attribute to any strain or bruise. This pain was principally felt when standing, or after walking too far. About eighteen months ago he first noticed a fulness in the sole, most marked under the metatarsal bone of the great toe, but extending along the sole up behind and a little distance above the internal malleolus. This extension from its original seat had taken place very slowly, and, he thought, was still going on. By reason of this swelling the foot has gradually become so disabled that he can scarcely walk at all without a crutch, and his sleep at night is much disturbed. He feels tolerably well in all other respects, but the condition of his foot completely disables him. On examination, a swelling was found occupying the inner half of the sole, and extending round the internal malleolus up a little distance above that prominence, where it terminated somewhat abruptly. The swelling was tolerably firm, but yielding to pressure in such a way as to convey the idea of a fluid or semifluid substance contained in a firm and rather tense cyst or sac. This idea was strengthened by an indistinct sense of fluctuation which could be felt at different points of the swelling and was sufficiently distinct to have induced the

gentleman who had charge of the case to aspirate the tumor. No fluid was obtained. The tissues surrounding the swelling seem to be in a perfectly normal condition, and no inflammatory features have at any time been noticed. After a careful examination of the case, I pronounced a very doubtful diagnosis, and added a prognosis which I said might be very serious, including in the future a possible amputation, and—what I did not say to him, however—a possible fatal termination. My reasons for this gloomy prognosis were drawn from my experience in two previous cases, which I now propose to relate.

For the clear understanding of what I am presenting to the Society, I ought perhaps to recall a few points in the anatomy of the parts involved. It will be remembered that, as the tendons about the wrist and ankle pass under their annular ligaments, they are contained in fibrous canals, which hold them firmly in their position and afford them a fulcrum, if we may call it so, against which the tendons act, in the varying positions of flexion and extension of the hand and foot. To facilitate the play of these tendons, the fibrous sheath is lined by a serous, or rather a synovial membrane, which at varying points is reflected from the surface of the sheath on to the surface of the tendon. This arrangement produces the usual closed serous sac, through which the tendon, covered by its layer of serous membrane, plays with a freedom from friction which is much increased by the smooth lubricating synovia which is secreted from its free surface. In the ankle these synovial sheaths commence a little above the malleoli, and extend forwards into the sole to a distance varying with the point of insertion of the tendons they accompany. The one accompanying the extensors of the foot and the flexors of the toes, is, it will be remembered, rather more extensive than the rest, and passes round the internal malleolus into the sole extending quite far forward dividing into a compartment for each separate tendon as it goes toward the distal end of the metatarsal bone to be inserted into the phalanx. It is well known that these synovial sheaths are subject to certain diseases, in which the synovial secretion is increased and variously altered. These diseases give us the usual swellings along the course of the tendons with which we are all familiar; which swellings may contain either pure serum, or thicker fluids variously modified, or fluids containing semisolid particles in the shape of rice grains or melon-seed and various other modifications of concrete fibrin. All these cases present one common feature, viz., an elastic, somewhat tense swelling which gives a feeling of fluctuation which is more or less distinct according as the contents are fluid or semisolid, the walls of the sac thick or thin, and the distention of those walls great or slight. The recognition of a distended synovial sheath is a matter of no great difficulty, but the appreciation of the nature of its contents is not so easy. Aspiration will reveal this point in many cases, but in many others nothing but a free incision will suffice. These affections, as most of us have experienced, are sometimes difficult to manage, particularly those of long standing, when the walls of the sac have become very much thickened, and the contents perhaps semisolid. Operations

¹ Read before the New York Surgical Society April 8, 1884.

upon these serous sacs have always been regarded with anxiety, because of the inflammation liable to follow their incision, an inflammation which unfortunately does not always confine itself to the serous membrane, but spreading to the surrounding areolar interspaces produces some of the most formidable cases of far-spreading suppurative cellulitis.

The following cases present some features in which they differ from those which I have thus sketched, and serve, it seems to me, to suggest a modification in diagnosis, and a caution in prognosis which may possibly save a serious disappointment.

CASE II.—Frank McN., æt. 43, a man of good habits, and apparently in excellent health, came into the New York Hospital December 5, 1879, with a swelling on the plantar surface of the great toe of one foot. It had commenced about two years before, without any known cause, and had slowly and steadily increased in size. It was from the first somewhat painful on walking, but of late had become so serious an impediment to him that he was very desirous that something should be done for his relief. There had never been any evidence of inflammatory action about it, though it was more painful at some times than at others, particularly when he had been obliged to stand or walk on it more than usual. On admission, a softish, doughy-feeling swelling occupied the under surface of the great toe, extending back into the ball of the toe, so that its posterior margin was well behind the metatarso-phalangeal articulation. It had an elastic feel, and when pressed upon the whole swelling became hard and tense. A feeling of fluctuation was distinct enough, but left a doubt in the mind whether it was produced by a fluid or a semisolid material within the cyst. The cyst wall seemed to be quite thick. The diagnosis was clear as to the distention of the synovial sheath, but the nature and consistence of the contents were not so manifest. My notes do not say that aspiration was performed; but if it was, no information was elicited by it. The case was regarded as one of the usual forms of distention of the synovial sheath from a low grade of inflammation, with effusion of a fluid, which had become partially solidified by the admixture with it of some form of aplastic fibrin. I was at that time experimenting with "through drainage," and on the 6th of January I employed that method in the treatment. An opening was made into the sac as far back as possible, and the contents were, with some difficulty, squeezed out. The substance thus evacuated was of a yellowish-white color, looking not unlike the sebaceous contents of some of the cysts of the scalp; but it was evidently not a perfect fluid, for certain portions of what was squeezed out showed some such coherence as would be found in a soft growth which had been forced from the cavity in which it had lain, and which, though in the main broken up into a diffuent pulp, showed clear indications of its having been originally a continuous tissue, though of the softest possible consistence. Not much attention was given to this peculiarity at first, as its cohesion was supposed to be explained by the idea of the fibrinous masses of which the substance was partly composed adhering more or less intimately together. It was afterwards recognized that this feature was of

most important significance. After emptying the cavity of all that could be forced out, the walls, as far as could be seen through the opening, presented the ordinary smooth, shining, white surface of healthy synovial membrane. An opening was now made at the anterior extremity of the cavity, and a perforated drainage-tube passed from one opening to the other. The wound was dressed antiseptically, and the ends of the tube were allowed to project through the dressing, thus allowing the cavity to be easily washed out with a weak solution of carbolic acid. No inflammatory reaction occurred. The tube was removed in about a week, and the wounds soon healed. The patient thought himself cured, and could walk pretty well before he left the hospital. Six months afterwards, I saw him, with the swelling about as bad as before, and the impairment of motion steadily increasing. From that time I have not seen him.

The report of the pathologist on the material expressed from the cavity was as follows: "Specimen consists only of irregular fragments scraped and torn out of what seemed to be a cyst, though the cyst-wall was not demonstrated. Microscopic examination: 1st. When examined in fresh state there was found to be much amorphous fibrin, and tumor was thought to be a benign cyst. 2d. The fragments when hardened show, upon section, in some cases only amorphous fibrin, but in other cases the typical structure of spindle-celled sarcoma."

CASE III.—Delia D., æt. 25, entered the New York Hospital January 21, 1880, with a swelling of the sole of the foot. The history was similar to that of the other cases. She said that about two years previous she began to experience pain and soreness on walking, which she attributed to the pressure of her shoe. About eighteen months before her admission she sprained the same ankle, since which a lump appeared below the inner malleolus, which has slowly increased. It has given her much pain, especially on walking. The swelling had been punctured several times. The first time a little serum flowed out, but in subsequent punctures nothing was obtained. She appears to be in good general health, and when quiet does not suffer much from her foot. During and after walking, however, she suffers so much that she is completely disabled. The swelling occupies a large part of the sole of the foot, and extends behind and above the inner malleolus. It is softish, non-elastic, but by pressure on one part of the swelling the whole can be rendered tense. A feeling of fluctuation is perceptible, giving the idea of thick, viscid, or semisolid contents. The tissues overlying the tumor are perfectly normal. It was clearly a case of distention of the large synovial sheath which surrounds the flexors of the toes and the extensors of the foot; but the nature of the distending material could not, of course, be ascertained. In any case, opening the sac and emptying it of its contents was the first step in any method of cure. This was accordingly done January 27, 1880. An opening was made nearly as far back as the malleolus, and through it the cavity was evacuated. Nothing flowed out when the cavity was first opened, but on firm pressure a semifluid substance, which exactly resembled that found in McNair's case, was with some difficulty

forced out, leaving a large cavity extending forward so far that a straight steel sound passed quite to the root of the toes. The difficulty of extruding this substance was so great as to give me the idea of its adhesion to the walls of the sac. To make sure of this point, and to enable me to break up the semi-solid mass so that it could be thoroughly evacuated, I enlarged the opening till it admitted my finger. I could now recognize that there was, at many points, a close adhesion of the contained mass with the walls of the cavity, which were lined by a bright, shining serous membrane. The finger could now trace the division of the main cavity into several smaller chambers, which represented the prolongation of the sheath forward over each separate tendon as it went to be inserted into the phalanges. All these cavities had been enormously distended by the accumulating mass within, so that I could move my finger about through quite a large space in the middle part of the sole, and could even push the tip of it into some of the enlarged anterior digital prolongations. With the finger and with the scoop and forceps I evacuated the cavity as completely as I could, but I was sensible that a considerable portion of the mass was not reached, and could not by any of my contrivances be perfectly removed. The operation was completed by making an opening anteriorly near the base of one of the toes, and passing a through drainage-tube from one opening out at the other. The wound was dressed antiseptically, with the ends of the tube projecting, and a solution of carbolic acid 1 to 60 was injected into and through the cavity once in every three or four hours. No inflammatory reaction followed. The tube was not removed till February 6th. The wounds healed slowly. She was discharged improved May 4th, but, as in McNair's case, all traces of the tumor had not disappeared, and she could not walk without pain. The semisolid contents of the tumor were very carefully examined. To the naked eye it gave the appearance of a very soft, almost diffuent substance, much broken up by the violence done in removing it, but sufficiently coherent in many points to demonstrate that it was a soft tissue and not a thick fluid. The microscopic examination by Dr. Peabody showed "the typical formation of a spindle-celled sarcoma, being almost identical with the scrapings from the foot of McNair." She was readmitted to the hospital September 18, 1880. The swelling was as large as ever, and quite as painful. Her general condition was good. There was no cachexia and no enlarged glands could be discovered. There was, however, on the opposite side of the foot, another growth which had developed since she left the hospital, and which did not appear to have any connection with the tendons or their sheaths, and also another growth in the fatty tissue covering the lower surface of the os calcis. The clinical history, taken with the microscopic appearances, so clearly pointed to extension of sarcomatous disease, that amputation was advised and performed on the 9th of October, low down in the leg. She made a good recovery, and nothing has been heard from her since she left the hospital.

Dr. Peabody's report of the dissection of the foot is as follows: "Beneath the cicatrix, and extending

thence backwards and forwards over a space irregularly circular with a diameter of an inch and a half, is a new growth. It is very soft and friable, of a reddish-gray color, and contains numerous small spots of hemorrhage. It lies beneath the skin, and spreads thence deeply downward, involving the sheaths of the tendons. On the outer side of the foot, just below the malleolus, is another mass of similar material about as large as the end of one's thumb, which bears the same relation to the superficial and deep tissues as does the growth on the opposite side of the foot. Underneath the os calcis, is a mass of the same tissue three or four times the size of the last described mass. It invades the tissue of the bone at one point to the depth of a quarter of an inch. Just behind the ankle-joint is a very small collection of material apparently similar to the others; it is not larger than the tip of one's finger. These masses of new growth are all discrete, being separated by areas of tissue to all appearance healthy. The tissue of the new growth, examined microscopically, is found to be very rich in spindle cells and in oval cells of small size, joined by a very small amount of fibrous intercellular substance." From this it is evident that the recurrence was not confined to the synovial surface, as was the original disease, but had passed through into the surrounding tissues, and besides had developed in new and isolated spots, where it was not known or suspected to exist at the time of operation. This, therefore, may fairly be regarded as a case not merely of recurrence *in loco*, but one of commencing generalization, which entitles the affection to be considered as of the most decidedly malignant character.

The literature of diseases of the synovial sheaths seems to be extremely meagre. A great many isolated cases of the ordinary forms are scattered through the journals, and Mr. Hulke, in the *Medical Times and Gazette*, gives a short account of a case in which he found, in a post-malleolar swelling, the cavity filled with small grains, as he describes them, of the shape and size of melon-seeds; but I have not yet been able to find any description of an endogenous growth within the synovial sheaths which in any way resembles that which we have been considering. Fournier and Verneuil have published short papers on the form of synovial distention which is dependent upon syphilis, but to this form their cases and remarks are strictly confined.

I have presented these cases to the Society because I think they offer a phase of sarcomatous disease which has not hitherto been described. Beside the interest which may attach to them as rare developments of sarcoma, they have, I have thought, a practical importance in the diagnosis, and especially in the prognosis of synovial diseases. Traumatic and spontaneous inflammations of the synovial sheaths, both acute and chronic, are certainly not very uncommon affections, and to discriminate between these comparatively harmless conditions and those in which dangerous and even fatal results may be, possibly, realized, is worthy of careful attention. That such discrimination can be made with certainty I would not venture to claim, but I think that the slow, painless progress—at least in the earlier stages

—the absence of distinct fluctuation, the firmness and tension of the sac, and the negative results of puncture, may lead to a suspicion, if not to a certainty, of sarcoma and may thus have an important bearing both on treatment and on prognosis.

Before concluding, I wish to read the following letter:

DEAR DOCTOR:

I am not sure whether this case belongs to your series or not.

Male, 30, laborer. Tumor removed by Dr. Wood, June, 1869. Ten years ago patient first noticed a tumor the size of a pea in the palm of the hand. It grew slowly at first, rapidly within the last three months. It is now situated between the palmar fascia and the sheath of the tendons. It is of pyriform shape, six and a half centimetres long.

When laid open, the tumor is found to consist of a fibrous cyst-wall, from which grow soft masses filling up the cavity. These masses are soft, succulent, yellow, mottled with hemorrhages; they are composed almost entirely of cells, which are of round, oval, fusiform, and stellate shapes.

The history as to the exact position of the tumor is not satisfactory, but I believed at the time that it originated in the sheath of one of the tendons.

Yours truly,

FRANCIS DELAFIELD.

THE PATHOLOGY, ETIOLOGY, AND PROPHYLAXIS OF PUERPERAL FEVER, FROM THE VIENNA STANDPOINT.

BY W. W. JAGGARD, M.D.,

ADJUNCT PROFESSOR OF OBSTETRICS IN THE CHICAGO MEDICAL COLLEGE.

(Concluded from p. 445.)

III. PROPHYLAXIS: A. Before Parturition.—Adequate ventilation, the maximum quantity of "unpre-breathed" air—to use one of Prof. Penrose's happy expressions—is the first, and, perhaps, the most important precept in the prevention of puerperal fever. In the words of Prof. Carl Braun,¹ "Puerperal women are to be isolated not by insulated houses and gardens, not by walls, but by the continuous conduction of large quantities of fresh, pure, warm air."

Since infection may occur before the first stage of labor begins, the ventilation of the apartments of the *pregnant*, as well of the parturient or puerperal woman, requires critical attention. A generous change of air is a far more efficient means of prophylaxis than the removal of articles of furniture, such as curtains and chairs, or the most elaborate germ-extermination by carbolic acid scrubbing and sprays.

The temperature of the woman should be carefully noted during the last weeks of pregnancy. Lukewarm baths, during this period, are of marked benefit. Immediately before parturition, a good bath in lukewarm water with a vigorous application of soap, is indicated for obvious reasons.

B. During Parturition.—Prophylactic measures during labor may be conveniently comprehended under the following rules:

1. The physician, midwife, or any attendant must not have come within the sphere of activity

of any contagious or infectious disease for the space of twenty-four hours, at least, preceding labor. A similar degree of freedom from infectious matter is demanded as regards wound secretions, healthy or otherwise, and animal cadavers.

2. The temperature of the woman must be taken before the vaginal examination is made. If the patient has an abnormally high temperature, as the result of endometritis with or without *tympanites uteri*, the medical attendant is usually banished, after the delivery of the child, from the lying-in-chambers in the departments of Braun and Spaeth, for the space of twenty-four hours. During this period he is not permitted to examine healthy pregnant, parturient, or puerperal women. Braun enforces in his clinic, and recommends in private practice, the rule of taking the temperature of the parturient woman at intervals of three hours. He has corroborated Winckel's researches into *toko-thermometry*, and regards the temperature as an indication of the highest importance in the determination of the time for operative procedure, and as a prognostic element during the puerperium.

3. The hands of the examiner must be free from infectious material, and must be absolutely clean. Freedom from infectious matter is assumed, if the physician's hands have not come into contact with any pus-secreting surface—healthy or otherwise—or cadaveric material, for twenty-four hours preceding labor. The second condition, according to Braun, requires that the hands, and particularly the fingernails, be scrubbed with a nail-brush in a running stream of two per cent. solution of carbolic acid; a soft soap containing a large excess of alkali is employed. After carefully trimming the nails, the hands are dipped into a one-fifth per cent. solution of potassium permanganate, until colored brown. They are then immersed for a few seconds in a ten per cent. solution of hydrochloric acid. The hydrochloric acid, suggested by Prof. Schneider, acts as an efficient disinfectant, at the same time removing the stain of the chameleon mineral. As a lubricant for the examining finger, a two per cent. solution of carbolic acid in glycerine is used.

This method of disinfection of the hands has been tried in Braun's wards, with the happiest results, since 1862. Prof. Spaeth insists merely upon Castile soap, nail-brush, two per cent. carbolic acid, and vaseline.

4. Irrigation of the external genitals during labor with some disinfectant solution, such as two per cent. solution of carbolic acid, one-fifth per cent. solution of salicylic acid, one-tenth per cent. solution of thymol, is of advantage, especially during an epidemic of puerperal fever. In protracted labors, after rupture of the bag of waters, and partial or entire escape of the amniotic liquor, sitz-baths of lukewarm water several times during the day have a beneficial effect upon parturition, and prevent infection.

5. Irrigation of the uterine cavity is indicated, after delivery of the placenta, by septic endometritis, discolored, bad-smelling amniotic liquor, dead and macerated foetus, or by the invasion of the uterine cavity by the hand or any instrument.

¹ Gynäkologie, p. 884.

The curved uterine tube is of hard rubber, 25 cm. (10 inches) in length, 3 cm. ($1\frac{1}{4}$ inch) in circumference, and terminates in an olive with lateral apertures. The irrigator is a modification of Esmarch's by Leiter, and is simply a large, conical glass flask. A weak solution of thymol is recommended as the disinfectant injection. All air in the rubber conducting-pipe and uterine tube is carefully displaced before the introduction of the latter into the cavity of the uterus. It is customary to introduce within the uterine cavity and vagina, after irrigation, a *bacillus* containing five grammes of iodoform.

6. All instruments employed during labor, inclusive of uterine tubes and catheters, are kept submerged in a five per cent. solution of carbolic acid.

7. The placenta must be critically examined, and all remaining tufts or blood-clots removed from the uterine cavity. Massage of the fundus and Credé's method of expression usually answer every indication. In Braun's clinic, in the eleven years from 1862 to 1872, inclusive, 48,249 women were delivered. The placenta was expelled by uterine massage or Credé's method in 48,132 cases, or 99 $\frac{8}{10}$ per cent. Detachment, by the introduction of the hand into the cavity of the uterus, was required only in 117 cases, or $\frac{2}{10}$ per cent.

In general terms, it was necessary to detach the placenta by the hand introduced into the cavity of the uterus but once in five hundred cases.

8. At the close of the third stage of labor, the perineum must be carefully examined, and all lacerations or episiotomy wounds must be closed by *serres-fines* or sutures. Contused wounds of the vagina must be painted over with neutralized tincture of the sesquichloride of iron, acetic clay, tincture of iodine, Goulard's extract, thymol, or carbolic acid. Fehling's powder (salicylic acid one part, starch five parts) acts well.

C. During the Puerperium.—The rules for the management of the puerperium may be collected under six headings, and are essentially those enunciated by Braun in a work upon the puerperal process, published years ago.

1. A rapid healing of the uterine wound is best effected by rest, restricted diet, and the most absolute cleanliness. It is seldom that vaginal injections are indicated, and still more rarely are intrauterine irrigations required.

2. The resorption of pus, secreted by the wound surface of the uterus, is best prevented by the exhibition of large quantities of lukewarm, sweetened drinks, and avoidance of all diuretics, diaphoretics, and drastic cathartics.

3. The dangers of puerperal thrombosis are lessened by securing increased uterine contraction in the third stage of labor and during the early hours of the puerperium. Massage of the abdominal walls and fundus, for a considerable length of time, at regular intervals, application of the binder, and exhibition of *secale cornutum* are preventive means which must be employed, particularly during the presence of an epidemic, even if no *post-partum* hemorrhage be perceptible.

4. The lochial secretion must be regulated by

rest in bed, utmost cleanliness, protection from catching cold, and careful ventilation.

5. The resorption of pus through the genital "puerperal ulcers" must be prevented, as far as possible, by the topical application of potassium permanganate, basic sesquichloride of iron and iodoform, through the first eight days of the puerperium.

6. To check the fermentation-process in the blood, or to limit its pernicious tendencies, from five to fifteen grains of quinine may be administered daily with advantage. Dysphoria, elevation of skin temperature above 39° C., and pulse frequency above 100, constitute indications for the exhibition of this drug.

The prophylactic measures thus briefly sketched have been in active operation since 1862. The results are evident upon inspection of the statistics, which have been most conscientiously and accurately compiled, and there can be no reasonable doubt as to their absolutely truthful character.

From 1847 to 1862 there were in the Vienna Obstetric Clinic 64,500 cases of labor, with a mortality of 3.45 per cent., and, from 1863 to 1878, in Carl Braun's wards there have been 61,949 cases, with a mortality of 1.61 per cent.

Since 1878, the results have been even more favorable, so that, at the present time, the mortality rate from puerperal fever in Carl Braun's clinic is one-half of one per cent. During the winter quarter of 1883, among some nine hundred cases of labor, no death resulted from puerperal fever.

PUERPERAL ECLAMPSIA TREATED WITH PILOCARPINE.

By E. L. MARÉCHAL, M.D.,
OF STOCKTON, ALA.

HAVING recently seen a report by Dr. Murphy, of Sunderland, Eng., of two cases of puerperal eclampsia successfully treated with pilocarpine (*Am. Journ. of Obstetrics*, December, 1883), and having, during the past year, had the same experience in the use of that remedy, in the same morbid condition, it may be of sufficient interest to the profession to justify me in putting it upon record; more especially since the unfortunate results reported by Barker, of New York, may deter others from giving their patients the benefit of what my experience, while limited, induces me to look upon as a valuable addition to our therapeutic resources.

Mrs. B., aged twenty-one years, had had two abortions at about the sixth week, and was now well advanced in the ninth month of her third pregnancy. On June 20, 1883, I was requested by her husband to see her, on account of the disturbed condition of her bowels. I found her sitting up, but enormously cedematous, and with vision so disturbed as to be unable to recognize anyone when seated beside her. There were headache, vertigo, and persistent nausea, with occasional paroxysms of vomiting. While the bowels were greatly disturbed, the calls to stool being frequent and the dejections watery, the urinary secretion was so much below

the normal as to be practically *nil*. Upon examination with heat and nitric acid, the urine became almost solid in the test-tube. No microscopic examination was made. Ordered her to have sulphate of magnesia to encourage the watery dejections, and Basham's mixture *ter die*. For the next several days there was an apparent improvement in her condition, the oedema partially subsiding, and the kidney secretion being greatly augmented. On the morning of the 24th, she was seized with eclampsia. Found her in a convulsion, having had two before my arrival. Upon inquiry, I was informed that in the past twenty-four hours there had been no action upon the bowels or bladder, and soon satisfied myself that the latter organ was empty. I immediately gave one-fifth of a grain of pilocarpine muriate, hypodermatically, and in four or five minutes the characteristic sweating ensued. She went into convulsions just as I administered the pilocarpine, but so soon as its characteristic effects were produced she became thoroughly relaxed, and had no further trouble. In five hours there was a copious dejection from the bowels and bladder. The pilocarpine produced profuse sweating, and notwithstanding that she lay in a comatose condition for the next twenty-four hours, it was not thought necessary to give anything, not even to counteract the so much dreaded depressant effect of the remedy employed. On the 26th, she was bright and cheerful, but still complaining of dimness of vision and headache. On the 27th, after a perfectly normal labor of short duration, I delivered her of a living male child, without interference or an anæsthetic.

With a clear conception of its physiological action, pilocarpine was employed in the above case, with the happiest results. Believing, as I do, that puerperal eclampsia is, in most instances, a reflex-neurosis, while the retention of excrementitious substances only renders the patient more susceptible to the eclamptic seizure, and at the same time exerts an aggravating influence, I do not believe that the administration of pilocarpine would yield the same beneficial result in every case. But, in cases in which there is a complete locking up of the secretions, and convulsions ensue, the plain and positive indication is to produce vicarious elimination, and what channel is more available than the skin, and what agent more certain and rapid in its effects than pilocarpine? It acts more rapidly than the hot baths so largely employed in Vienna, and my experience, not only in the eclamptic condition, but in other morbid states in which the production of profuse diaphoresis was indicated, justifies me in the assumption that, judiciously administered, it is as safe as many therapeutic agents daily used by practitioners, and certainly as reliable.

MEDICAL PROGRESS.

COMPLETE DISLOCATION OF THE ASTRAGALUS FORWARDS.—DR. L. McLANE TIFFANY reports the case of a man who slipped on an icy sidewalk, and landed with the ball of the right foot upon the edge of the curb—the heel, of course, unsupported. He fell to the ground,

striking his right side, and was at once aware that his foot had received injury, and so made no attempt to use or even move the injured member. Dr. Tiffany saw the patient at his home one hour later.

The foot was fixed rigidly midway between flexion and extension, the malleoli seemed nearer the sole of the foot than normal. There was no swelling, and anatomical points were well defined. A large, hard tumor was present upon the dorsum of the foot, which by sight and touch was clearly made out to be the astragalus. The extensor tendons and skin were tightly stretched over it. The bone was dislocated directly forwards the articular surface, for the tibia was subcutaneous; the head and neck could be felt anteriorly while the lateral facets for articulation with the malleoli were plainly to be recognized. Reduction was attempted, without anæsthesia, in view of the recent occurrence of the accident, as follows: One assistant grasped the heel and anterior portion of the foot, making strong extension; another steadied the limb at the knee, while the operator stood to one side of the foot and grasped the malleoli with one hand, and with the other manipulated the astragalus back to its proper situation. He made pressure from side to side upon the dislocated bone so as to dislodge it, and then pressed directly backwards toward the joint. Extension and manipulation were commenced very gently, so as not to startle the muscles already too tense. Within less than two minutes reduction was effected. The limb, as high as the knee, was enveloped in raw cotton and put in a starch and pasteboard splint. A good deal of swelling took place, and discoloration from effused blood extended in patches as high as the knee. A large, dark discoloration appeared behind and below each ankle, the bones being of course intact. Convalescence has continued without drawback. The foot remained in the splint during fourteen days.

Seven weeks after the accident the foot is still somewhat swollen, but the patient walks with a cane.—*Maryland Med. Journ.*, March 29, 1884.

NEPHROTOMY FOR OBSTRUCTIVE SUPPRESSION OF URINE.—MR. BENNETT MAY thus expresses his ideas for operative measures in obstructive suppression: In anuria from impacted calculus, urine does not ordinarily accumulate in the loin to any appreciable degree. Dilatation only takes place where the obstruction is partial in degree and of long duration. Where it is sudden and complete, no dilatation occurs, because the secretion is arrested directly the pressure is equalized; and, under these circumstances, not more than half an ounce of urine will be found in the pelvis of the kidney; though ultimately, as the experiments by Strauss have shown, the organ may become converted into a cyst. The usual seat of impaction of a calculus is near the bladder, or so far down the ureter as to be quite away from the possibility of dislodgement.

His suggestion is to establish a fistulous opening in the loin (by nephrotomy) for the escape of the urine; and if the operator be so fortunate as to light on the stone at the upper end of the ureter, so much the better prospect of obtaining a satisfactory result.

When there is pain in one loin, and the patient is seen early enough, an exploratory incision should be made on that side. The incision should be made before

symptoms of suppuration set in, as patients sometimes die of abscess caused by the irritating effect of the stone.

When should the operation be performed? A previous history of suppression, with pain on the same side, or a previous attacks of nephralgia, would point to the presence of a calculus lodged in the pelvis of the kidney or in the upper end of the ureter, and would indicate an operation for the double purpose of removing the stone and relieving the suppression; and, as the further retention of the stone must lead to destructive disorganization of the kidney, he thinks that the surgeon is justified in operating early under these circumstances. Swelling and resistance in the loin, with rigors and fever, point to suppuration, and really demand the very simple proceeding of an incision down to the kidney, though it is doubtful whether it would not now come too late.

In a first attack of suppression, and without previous nephralgia, the decision may be more difficult, because spontaneous relief is not uncommon. One such recovery, after twenty days' complete anuria, is recorded by Dr. Russell. He believes the average duration of life is from six to eight days, death usually terminating the scene rather suddenly, and without uræmic symptoms. He knows that a patient can live five whole days without a particle of renal tissue in the body, and suffer very little obvious disturbance (*British Medical Journal*, September 1, 1883). But he thinks the surgeon would be justified in operating almost at any time, for he can do very little harm, though he might receive the blame of an unavoidable death in case of failure to relieve.—*British Medical Journal*, March 8, 1884.

NEPHRECTOMY.—PROF. A. VERCELLI performed this operation, in Milan, on March 10, for carcinoma of the kidney. The patient died in five hours.—*Gazz. degli Ospitali*, March 19, 1884.

THE CURATIVE ACTION OF IODOFORM IN CARDIAC LESIONS.—PROF. BAL. TESTA has recently made a report on this subject in the *Journal di Clinica e Terapia*, Fasc. 8 and 9, 1883. Iodoform was first used in cardiac affections by Moleschott. He was induced to use it by finding that it increased the force of the heart, and produced painful palpitations when given to healthy persons.

Five cases have been reported in which this drug was successfully used; of these four were cases of mitral insufficiency with œdema and catarrhal bronchitis. It has a salutary action in organic diseases of the heart and in the functional troubles dependent upon them. It should be used with great prudence, as it causes, in toxic doses, fatty degeneration of the heart, liver, and kidneys.—*L'Union Méd.*, March 11, 1884.

THE TREATMENT OF FISTULA IN ANO.—After a review of twenty-three cases of fistula ani operated on during three years in Prof. Grube's clinic, in Charkov, DR. V. M. ZAKHAREVITCH (*Vratch*, 1882, No. 36) comes to the conclusion that, as a rule, the cutting operation must be performed. The use of the thermo-cautery must be limited only to those rare cases in which the patients are extremely exhausted, and in which even the slightest loss of blood must be avoided. The method of dividing the fistulous bridge by means of a stout silk ligature must be entirely discarded, since it is associated with

prolonged reaction and suppuration. In the author's cases, the wounds made by the knife healed in eighteen days; those by the thermo-cautery, in twenty-seven; and those by the ligature, in thirty-five days.—*London Medical Record*, March, 1884.

THE PRESENCE OF FIBRIN IN THE URINE.—The presence of fibrin in the urine, says MEHU, is not rare. It would seem that whenever one finds blood in the urine, fibrine should also be found; but such is not the case; for generally the examiner finds more dissolved albuminous material, and blood-serum consequently, than would be expected from the number of red corpuscles. Apart from cases of copious hemorrhage into the bladder, fibrin is not unfrequently found in the urine. It easily remains dissolved if the urine is ammoniacal, and cannot be easily separated after slight acidulation with acetic acid, since it has remained for a certain length of time in ammoniacal urine containing bacilli.

On the other hand, in certain cases, fibrine is found when there is no trace of a blood globule, or when the amount of blood is infinitesimally small as compared with the amount of fibrin. Mehu reports two cases in which the proportion of fibrin was increased; in one the urine contained no blood; in the other there was a very small amount of blood.—*Ann. d. Mal. Gén.-Urin.*, March, 1884.

LIGATION OF THE SUBCLAVIAN ARTERY.—Dr. Giovanni Paccinini performed this operation on a boy, fourteen years of age, on January 5th, in Rome. The operation was done on account of a wound of the left axilla, which involved the artery and vein. The boy was in a satisfactory condition fifteen days afterward.—*Gazz. degli Ospitali*, January 20, 1884.

TREATMENT OF RETRO-UTERINE HÆMATOCELE.—ZWEIFEL's method of operating is, first, to wait until the tumor is absolutely encysted. An incision is then made in the abdominal wall without touching the cyst; the hemorrhage being arrested, the vaginal wall and the blood-cyst are separated. Then an incision is made in the wall of the cyst, large enough to admit a finger, so that the cyst-wall may be seized, and the cyst is then further opened with a probe-pointed bistoury. After this, it is washed out, and a drainage-tube put in. The mortality of the different methods is, by incision, 15.3 per cent.; by puncture, 15.1 per cent.; by expectation, 18.4 per cent. The operation should never be performed until it is absolutely certain that the hæmatocele is encysted.—*Archives de Tocologie*, March, 1884.

ABSCESS OF THE KIDNEY.—J. SINGER (*Prager med. Wochens.*, No. 47, 1883) reports the case of a man, æt. 25, who, when seven years old, had a fall, from which he had hæmaturia; since that time he has had occasional pain in the region of the left kidney. After an attack of typhoid fever he began to pass blood and pus in the urine, and on examination a fluctuating tumor was found in the left hypochondrium. The tumor then began to disappear, and the man recovered. Singer thinks that the abscess must have discharged into the pelvis of the kidney.—*Centralbl. f. d. klin. Med.*, February 9, 1884.

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ERGOT IN CONGESTIONS.

THERE are certain long-known drugs which have acquired within the last few decades so much wider employment by the profession than they formerly possessed that they may be looked upon as new remedies. Thus it has not been very many years since bromide of potassium was used solely as an alterative, and in doses of five or ten grains. Next to the bromides in the importance of this second growth, in medical esteem, comes ergot, a remedy which seems steadily to increase in popularity and usefulness.

In a late number of *L'Encéphale* is an article by DR. GIRMA on the use of ergotine in general paralysis, and although we are very sure that few will obtain the results his enthusiasm expects, yet he has made it clear that the fungus should be boldly exhibited in cases offering the prodromal symptoms of the affection named. The first case reported by Dr. Girma was probably one of chronic alcoholism, and the cure permanent; but in sundry instances of seemingly true paresis there were very marked benefits derived from the daily use of about ninety grains of ergotine.

Without discussing the article of Dr. Girma any further, we desire to call the attention of our readers to the value of ergot as a remedy in all forms of congestions not attended with distinct inflammatory symptoms. As is well known, the drug has the power of contracting the smaller vessels,—is, indeed, the purest vaso-motor stimulant of the pharmacopœia. It seems to be a law of therapeutics that an enfeebled part feels first a new influence entering the system, and so when a vaso-motor stimulant comes upon the scene of a congestion, the locally dilated vessels are toned up more than are those of the general system, and

the diseased vessels are thereby brought nearer the condition of the normal ones.

The reputation of ergot as a remedy in pulmonic hemorrhage is established, and we are all accustomed to say that the bleeding is stopped by the contraction of the vessels. It is, however, absurd to suppose that a ruptured bloodvessel can be so contracted as to arrest the flow of blood toward the leak. Probably, what the ergot does, is to put an end to the local congestion which accompanies and, in most cases, precedes the hemorrhage; indeed, is the immediate cause of it. In spinal and cerebral congestions, neurologists have been learning more and more to rely upon ergot as being at least more efficacious than other drugs; but it is probably in pulmonic and various visceral congestions that the fungus will eventually prove most useful.

When a decided effect is required, there is no use in administering the drug in the doses habitually employed by many practitioners. A teaspoonful of the fluid extract is looked upon by many as a large dose, but is really too small to be of value. Dr. Girma gives six grammes, or about ninety-two grains, of ergotine a day, which, as near as can be estimated, is equivalent to an ounce of the fluid extract. We have for years been in the habit of giving much larger doses; an ounce and a half of the fluid extract per day may be looked upon as moderate dosing. The ravages of ergotism have been so frightful that the fear of chronic poisoning is ever before the eyes of many of the profession; but we believe such fear, so far as the therapeutic use of the drug is concerned, to be merely fright at a bogey. Ergotism has occurred only in peasantry who were fed upon bread made from infected rye. When it is remembered that in bad seasons as much as thirty or even fifty per cent. of the flour has been ergot, and, also, that the German peasant lives chiefly upon bread, it can be understood what enormous amounts of the ergot have been taken—very many ounces per day. We have given three fluidounces of the fluid extract daily for some weeks, and have never seen any other evil result than disordered digestion or sick stomach.

The great difficulty in the use of these large doses is their tendency to nauseate; and the method of administration is a very important subject for study. The new extractum ergotæ, U. S. P. 1880, which may be considered as five times the strength of the ergot itself, affords much the best preparation. It is too soft to be made into pills without an excipient, but pharmacutists habitually use too much of the latter. Their object is to have hard, firm, non-adhesive pills. There is, however, too great an increase of bulk; moreover, a large, soft, plastic mass is much easier swallowed than a round, hard body of equal size. The tendency of such masses to cohere is readily obviated by putting an abundance of liquorice-

root or other drying powder in the box. With a little care, ten grains of the extract can be so prepared as to be readily swallowed. The introduction to the profession, of soft capsules containing ten grains of the extract, would be a useful way of exercising some of the pharmaceutical energy at present so rampant.

Even with the greatest care, the hypodermatic administration of ergotine is too apt to produce disagreeable local symptoms to warrant its employment, except in emergencies. When a continuous effect is desired, it is often very well to use, at intervals, the rectum as a door of entrance to the system. A thirty grain ergotine suppository is very readily used, but, in our experience, an attempt to administer exclusively in this way soon leads to rectal irritation.

THE MEDICAL SERVICE ON THE TRANSATLANTIC STEAMERS.

DURING the past few years strenuous efforts have been made in England to reform the medical service on ocean steamships. The British press has lent its strongest advocacy, the principal medical bodies have recorded an emphatic condemnation of the existing system, and the British Medical Association, with its customary activity, has both memorialized and interviewed the President of the Board of Trade.

The question is not of a doctor's grievance. The present position of a ship's surgeon is certainly unfitted for an educated gentleman, yet so few are called upon to fill it that the conditions need not become a matter of wide professional concern. The really important aspect of the matter is the grave danger to the travelling public from an uncertain, and often incompetent, medical attendance, and the want of suitable means of caring for the sick during the transatlantic passage; and, further, and even of greater moment, the easy ingress offered to zymotic invasion of this country by the defective sanitary arrangements, and the absence of an authoritative sanitary administration, on crowded emigrant steamers.

The memorial of the British Medical Association succinctly enumerates these dangers, and suggests a scheme of reform against which there can be no legitimate objection. Yet because it proposes that a regularly constituted marine-medical service should be formed, which would be under national control, and no longer subject to the ship-owners, that powerful and united body have offered a determined resistance, which so far has prevailed.

It appears that of the medical officers entrusted by British ship-owners with the care of lives at sea, a very large proportion are entirely unsuited for the important duties assigned them. Thus, of 141 who during the first six months of 1882 had medical charge of transatlantic steamers, not less than 60 would have been ineligible, through lack of the

minimum professional qualification, for the most junior medical appointment in any of the English public services; while of the entire number only 27 who had reached their thirtieth year, possessed the lowest qualification as physician and surgeon which would entitle them to seek employment in the treatment of English soldiers, sailors, convicts, or paupers. In conjunction with which we learn that the ship-surgeon has not a particle of administrative authority, even in the most purely sanitary matters; that he is a kind of puppet in the hands of the captain and owners, and dare not take any step—no matter how urgently demanded for the safety of the passengers—which would be contrary to the interests or pleasure of his employers; that the hospitals on board are insufficient, ill placed, and often devoted to other purposes than the accommodation of the sick; and that there is absolutely no provision for the nursing of the sick, no matter how large the number of passengers carried.

Then comes the disastrous result: Among emigrants to this country, who are usually of high vitality, among whom there are fewer women and young children than in any stationary population, all of whom were passed as healthy at the commencement of their ten days' voyage, and under circumstances which should be eminently favorable to health, there exists a mortality over double the ordinary death-rate on land—a mortality pronounced by those well qualified to judge to be far in excess of the necessities of transit. And when so many deaths occur during the short transatlantic passage, it is reasonable to believe that there is a general depression of health which may be a permanent injury to many, or fatal soon after landing, but of which it is impossible to form an accurate estimate.

This defective medical service on shipboard is of most importance to the public at large in its bearing upon the importation of infectious disease. Scarce one of the lesser outbreaks of smallpox or other zymotic fever, which are of such frequent occurrence throughout the United States, but can be traced to the recent advent of immigrants; showing how futile is our quarantine system under present circumstances. Medical inspection at the time of disembarkation may be, for various reasons, desirable, but it cannot detect infectious fevers in their incubation stage, and therefore is no protection when they have appeared on board during the voyage, or when that has been accomplished within the longest incubation period of disease—possibly contracted before starting. Security in this regard must therefore lie in insisting upon every vessel and her passengers remaining in absolute quarantine during at least fourteen days from possible infection, or else in providing for a thoroughly reliable and independent medical service on board.

This latter alternative will certainly be most con-

venient, and to accomplish it should engage the earnest attention of Congress when the bill introduced by General Slocum comes before the Committee. It is believed that the service can never be thoroughly satisfactory until the medical officers are removed from the control of the ship-owners, and appointed by, and held responsible to, a government authority.

Three-fourths of the passengers by transatlantic steamers are either Americans or emigrants intending to make this country their permanent place of residence. It is therefore not only the right of our Government, but its manifest duty, to at least exercise supervision over this service. The British Australian Colonies long since established a precedent for even an active control; every vessel carrying emigrants to Queensland, New Zealand, or New South Wales, is forced to have on board a medical superintendent appointed by the Government of the Colony, and responsible to it alone. Why should not the United States show equal solicitude for the protection of its citizens? Certainly it is useless for Congress to make laws regulating the carriage of passengers by sea without in some way providing for their enforcement.

PARALDEHYDE AS A HYPNOTIC.

SINCE the publication, in 1883, of the papers of Cervello and Morselli, upon the physiological action and therapeutical effects of paraldehyde, from which it appeared that the agent was a valuable hypnotic, producing a calm sleep, without bad after-effects, the drug has been tried by Berger, Gugl, Peretti, Langreuter, Albertoni, Quinlan, Dana, J. Brown, Dujardin-Beaumetz, J. C. Wilson, Riggi, and others, with the most promising results.

The latest contribution to the subject is that of DR. VON NOORDEN, of Giessen, published in the *Centralblatt für klinische Medizin*, No. 12, 1884. Given in doses varying between forty-five and ninety grains, the average being about sixty-eight grains, a refreshing, profound sleep was induced in from fifteen to forty-five minutes, which lasted from five to six hours, and was followed, in exceptional instances only, by nausea and persistent bad taste. It was found to be especially useful in the wakefulness of nervous affections, in pneumonia, emphysema, bronchitis, pulmonary phthisis, spinal and other nervous disorders, myocarditis, valvular insufficiency, icteric pruritus, chronic rheumatism of the joints, and for the relief of neuralgic and rheumatic pains. As contraindications, there were noticed serious disease of the stomach, and phthisis in an advanced stage, with implication of the larynx, in which the cough was increased, and nausea and vomiting were excited, probably as the result of direct irritation of the ulcerated mucous membrane.

In only two of the other cases were vomiting and headache produced, inconveniences which, it need scarcely be said, are witnessed after the administration of other narcotics.

Particular care was taken to observe the action of large doses of paraldehyde on the respiration and the circulation. While it exerted no influence whatever on the breathing, it slightly reduced arterial tension and the frequency of the pulse; but these effects disappeared in a few hours. These observations are confirmatory of those of Peretti, and they are of great value in indicating that the remedy may be administered with safety in cases of weak heart and other cardiac affections in which chloral hydrate is contraindicated. It should be remarked, however, that in a recent discussion at the Société de Biologie, published in *Le Progrès Médical*, March 22, 1884, Hénocque and Quinquaud declared that the drug slowed the respiratory movements, without acting on the heart, and Boche-fontaine, on the other hand, observed that it diminished the rapidity of the pulse.

From the observations of Von Noorden, and of those who preceded him, it is evident that we possess in paraldehyde a hypnotic which is superior to, and more generally applicable than, chloral, since it can be administered for long periods in cases in which the latter drug would prove dangerous. A larger dose is, however, required to produce sleep than of chloral, and as it is rapidly tolerated, the dose has to be progressively increased. From the standpoint of expense, this is a serious objection, particularly in hospital practice, as we are informed that paraldehyde costs about seventy-five cents an ounce in this country, as against fifteen cents for chloral. This objection will be removed when there is sufficient demand for the agent.

KOCH'S SEVENTH REPORT ON THE CHOLERA BACILLUS.

WE publish elsewhere in our current issue the last of Koch's preliminary reports on the cholera bacillus. In it will be found the details of the discovery of these bacilli in the water of certain tanks in the vicinity of Calcutta, which are in reality small ponds, often located in marshy ground, surrounded by a few huts. The inhabitants make use of the water from these tanks for every domestic purpose, including drinking, bathing, and the washing of clothing, and latrines, of a very primitive design, are frequently erected on the banks and drain into the tanks. The water is, of course, under these circumstances, highly charged with foul organic matter, and totally unfit for use.

It appears that, from time to time, there have been observed localized epidemics of cholera which prevailed among the people living in the vicinity of these

water tanks, and the resident physicians had already sought to establish a relation between the drinking water and these localized epidemics.

One of these epidemics occurred while Koch's investigations were in progress, and it was found that the tank water was used in the usual manner for bathing, washing, and drinking purposes; and that the soiled clothes of cholera patients were also cleansed in the tank. Cholera bacilli were found in tolerably large numbers in the tank water during the epidemic. Now many other examinations of tank water, sewage, river water, and various specimens of dirty water, where cholera was not raging, were made with negative results. Whence Koch concludes that the localized epidemics of cholera are due to the drinking of tank water infected by cholera washings.

Koch also considers that these facts supplement those already adduced to show that cholera is the result of a special bacillus, and in a measure make up the proof which could not be obtained through experiments on animals.

Experiments were also made as to the influence of various germicides, as corrosive sublimate and carbolic acid, on the development of the cholera bacilli in culture-fluids, as well as to the behavior of the bacilli when excluded from the air, and when surrounded by carbonic acid gas, but the results are not reported.

Experiments with a view to discovering a permanent form of the cholera bacillus, corresponding to that of the indestructible spores of other bacilli, were also made, but without success.

PREVENTION OF INFECTIOUS DISEASES IN SCHOOLS.

THE Austrian Minister of Instruction, Baron Conrad, has just issued to all the school-boards of the realm, a stringent order in relation to the prevention of the spread of infectious diseases in schools, which, if rigidly enforced, will tend to reduce the amount of sickness and the death-rate from these affections. By this action one is led to infer that this important part of the supervision of the health of the school children has heretofore been neglected, and that some outbreak of disease has suggested the authoritative intervention of the Government. The action is commendable and worthy of imitation by people claiming a more enlightened school administration.

By this decree the director of a school is held responsible for the most watchful supervision of the health of the children entrusted to his care. Every pupil suffering from an infectious disease is obliged to absent himself from school until his return is assured, by competent authority, to be without detriment to the other children. Likewise, also those persons, teachers or scholars, who in anywise have been exposed to the influence of infectious diseases,

are obliged to remain away from school until it is established that their return will work no harm to the pupils.

It is made obligatory upon the director of a school to report immediately to the authorities, every case of infectious disease occurring among his pupils. Should disease of a contagious nature assume an epidemic character among the children of a locality, power is given him, in conjunction with the sanitary authorities, to close a class, or even the entire school. The director of a school is also enjoined to coöperate with the local health board in promptly removing any case of contagious disease which may have occurred among the occupants of a school-building; and, should it be advisable, the school must be closed and not reopened until after a thorough disinfection has taken place. Care is enjoined in regard to the use of disinfectants, and the children are to be properly guarded from their misuse.

Scholars are not to be permitted to visit houses in which infectious diseases are known to exist; and no public funeral is to be allowed when death has resulted from such an affection. Public notice of these rules is to be given at the beginning of every term and at the outbreak of an epidemic. Children's asylums and kindergartens come under the same regulations.

The Minister of Instruction has also issued special directions upon the subject of disinfection, which comprehend the present well-known measures and practices applicable to the sick-room, buildings, open spaces, sewage, body- and bed-linen, and clothing, water, etc., to which further allusion is unnecessary.

Specific instructions, such as the foregoing, emanating from the central government, which has the authority and power to compel their observance throughout the entire empire, give promise of comprehensive and most beneficial results. An experiment on so large a scale will be watched with the deepest interest, and will exert an influence upon school administration in other countries.

EXCISION OF THE PATELLA.

MR. DODD, of Newcastle-on-Tyne, reports in the *Lancet* for March 22, 1884, an interesting example of excision of the patella for caries, in which the joint was freely opened, and recovery ensued with a movable articulation. Instead of being the first recorded case of excision of the patella, with preservation of the functions of the joint, as Mr. Dodd thinks, we may call attention to the fact that Dr. O. B. Knobe, of St. Joseph, Missouri, removed the bone for necrosis, with a similar result, and that the full details of the case may be found in the *North American Medico-Chirurgical Review* for May, 1860.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

*Stated Meeting, April 17, 1884.*THE VICE-PRESIDENT HORACE T. HANKS, M.D.,
IN THE CHAIR.

DR. ROBERT ABBE read a paper entitled

A STUDY OF DUPUYTREN'S CONTRACTIONS OF THE HAND.

In it, he said, he referred to those contractions of the fingers which were formerly regarded as of a tendinous nature and considered irremediable until Dupuytren demonstrated their true character. Having demonstrated the palmar fascia and its digital prolongations, Dr. Abbe went on to say that Sir Astley Cooper really first discovered that this was the tissue involved in the contractions, but this remained practically unknown until Dupuytren made his famous dissection in 1832. In the report of his clinical lectures it is stated that the skin having been removed from the whole extent of the palm of the hand and the palmar face of the fingers, the fold or puckering of this structure entirely disappeared; it was, therefore, very evident that the arrangement which presented during the disease did not depend on this cause, but was communicated to it. The dissection being continued, the Professor discovered the palmar aponeurosis extended, retracted, and diminished in length, its inferior part being divided into cords, which passed on to the sides of the affected fingers. He cut the prolongations on the sides of the fingers, and immediately the contraction ceased, the fingers returned to a state of semiflexion, and, by slight force, to complete extension. The tendons were natural, the sheaths were not open, the articulations, ligaments, synovial membranes, and bones were in their normal state.

Since then, Dr. Abbe said, a dozen similar dissections had been made, and they demonstrated also that the tendons were unaffected, the bones and joints entirely free from disease, and the seat of the trouble confined to the aponeurosis alone. He then exhibited drawings of three dissections. The first was taken from Druitt, the original specimen being in the Museum of King's College, London. It was the dissection of a contraction of the little finger, showing a contracted band of palmar fascia, stretching across like the string of a bow, and the flexor tendons lying deeply along the concavity of the curve, close to the bones. The second drawing represented a dissection preserved in the Museum of St. Bartholomew's Hospital, and the third, Goyrand's dissection, taken from Billroth's work. The description of the latter agreed very closely with that of Dupuytren, although Goyrand regarded the lateral bands extending along the phalanges not as digital prolongations of the palmar fascia, but abnormal fibrous fasciculi, which extended from the fascia to the sheaths of the flexor tendons, into which they were inserted opposite the second phalanx.

The affection, Dr. Abbe continued, was one which rarely occurred before middle life. Two years ago Dr. W. W. Keen, of Philadelphia, had published an article on the subject in which he collected all the cases at that time on record, as far as he could ascertain, one hun-

dred and five in number, and the average age of the patients at the time the trouble commenced was forty years. It was also comparatively rare in women, the proportion of female cases being about one in twelve.

Dr. Abbe then gave a sketch of the clinical history of the disease, in which he stated that in the first stage there appeared a flattened nodular induration on the metacarpo-phalangeal articulation, the skin not being adherent to the thickened palmar fascia; in the second stage a thickened band of fascia, extending towards the finger, could be felt, and the skin became adherent, and in the third stage there was increased thickening of this band and of the fascia, while there was also formed another band leading towards the annular ligament of the wrist, and the finger or fingers were gradually drawn down towards the palm of the hand. Mr. William Adams, he said, had given the best *résumé* of the subject which had as yet appeared, and he quite agreed with this authority in his opinion that the facts relating to the anatomical conditions, as well as the clinical evidence presented in Dupuytren's finger-contraction all agreed in negating the supposition that the tendons or sheaths of the tendons were involved in these contractions. Like the tendons, the contraction-bands had arched fibrous sheaths; in the second place, they were not always on a line with the tendons; and, in the third place, when the bands were divided, the patient was immediately able to flex the finger or fingers as strongly as before the operation. Dr. Keen's figures showed that the ring finger was affected in eighty-eight cases, and the little finger in seventy-seven, while the index and thumb were affected in only thirteen and nine cases respectively.

In connection with the contraction of the fingers there were often associated pains, not only in the seat of the trouble, but also in other parts of the body. This was well shown in several of Dr. Abbe's cases, the histories of which he now proceeded to relate in detail. The first case (which, he said, had been previously reported) came under his observation in 1881. The patient was a cloth-cutter by trade, who had been suffering from marked contraction of the little finger for seven years, and slight contraction of the ring finger for one year. Two weeks before the operation the right hand had begun to be affected also; but all trouble at once disappeared in it, and in six months the man was able to resume his occupation.

The second case was that of a German, fifty-eight years of age, and also a cloth-cutter. Both hands were affected: in the right the ring and little fingers, and in the left the ring finger alone, and he attributed the trouble to pressure on the fingers. He had been a cutter for twenty years, and fifteen years ago the left ring finger had begun to be affected. Soon afterwards contraction of the right ring finger also commenced, and after a time he began to suffer very greatly, in addition, from "lame back." Although greatly crippled, he had pursued his occupation until three years before, when he was obliged to give up all work. He suffered so intensely from pain in the back that he placed himself under the care of Dr. Seguin, who, in connection with Dr. Gilvey and Dr. Amidon, applied the actual cautery, ice-pack, and electricity, both static and galvanic, with little or no relief; and they believed him to be suffering from organic spinal trouble. Finally, on account

of the contraction of the fingers existing in connection with the rachialgia, the patient was referred to Dr. Abbe, who had then published his first case. On the 24th of June, 1882, he performed Adams's operation, making six subcutaneous cuts in the left hand and four in the right, and applying straight splints. There immediately followed considerable amelioration of the pain in the back, and by the 4th of July, the tenth day after the operation, the improvement was so marked that he could stoop freely, and said that if his hands had not been confined in the splints he would have been able to dress himself, something of which he had been incapable for a long time. The man had subsequently been completely restored to usefulness. The case had been carefully watched for two years, and there had been no relapse of the deformity or the pain in the back; every point gained by the operation having been retained. Casts and drawings of the case were exhibited, and Dr. Abbe also presented the patient himself, who was seen to have perfect flexion and almost perfect extension of the fingers of both hands.

In the third case the patient was fifty-seven years of age, and suffered from double Dupuytren contraction. His mother had also suffered from contractions of the fingers, but had never had gout, so far as known. The right hand had been affected nine years, and he attributed the origin of the trouble to injury to the palm of the hand in ball-playing when a youth. The ring finger of the left had begun to contract three years before, and had afterwards been successfully operated on by another surgeon. The right hand had not been treated, and was found to be the seat of very marked deformity, the thumb, as well as all the fingers, being involved. Besides the deformity, there was a grave sub-inflammatory condition of the parts, with excessive tenderness; in consequence of which the patient was rendered almost helpless and suffered, in addition, from great mental depression. He was operated on in February, 1883, and twenty-five subcutaneous divisions were necessary in order to release the fingers entirely from the contracted bands of fascia holding them down. The hand was dressed antiseptically and placed, in a position of extension, in plaster-of-Paris. Severe cellulitis and oedema followed, however, and it was two weeks before the inflammatory condition set up by the operation subsided. Excellent flexion resulted, and at the end of one year and two months all that had been gained by the division of the contraction-bands was found to have been retained; while the patient had completely recovered his spirits, and his wife stated that he was now in better general condition than he had been for years.

The fourth patient was sixty years of age, and had had the trouble for fifteen years. Fifteen years ago, he had met with a slight cutaneous laceration on one of his hands, and within two months afterwards he noticed that a bunch had formed. The ring and little fingers of both hands afterwards became contracted. Early in February last, Dr. Abbe made twenty subcutaneous cuts in the palm of each hand, and applied an antiseptic dressing. For two weeks he kept up pretty full extension with splints, and during this time there was a condition of the hands somewhat resembling subacute rheumatism. This, he believed, was the result of nerve irritation incident to the operation. The patient was now presented to the Academy, at the end of nearly

eleven weeks after the operation, and although very considerable gain was found to have been made (as shown by the casts and drawings taken before the operation), the cure was not as yet complete. The trouble, Dr. Abbe explained, was not in the flexing of the fingers, but in the condition of the fibrous tissues generally, the result of the disease, which it would require considerable time to overcome.

The fifth case was that of a retired physician. He was sixty-one years of age, and had never had gout or rheumatism. The trouble had begun one year ago, and the ring fingers of both hands were now contracted. No operation had as yet been performed. The sixth case occurred in a female, who had contraction of the ring finger of the left hand, and the seventh was the result of a sprain. The eighth patient was a female, sixty-five years of age, who had contraction of both hands. She suffered from burning sensations in them, but had no neuralgic pains. The ninth case, in a man fifty-two years of age, showed well-defined palmar cords and puckered skin, and was associated with marked writer's cramp. The patient refused operation. In the tenth and last case, the patient, who was sixty-one years of age, had a gouty and rheumatic family history, and suffered much from neuralgia of the palm of the hand and pain in the back.

After a careful study of these cases, Dr. Abbe said that he would suggest the following points as a working hypothesis of the causation and character of this disease:

First. A slight traumatism, which often entirely escaped notice.

Second. A spinal impression produced by this peripheral irritation.

Third. A reflex influence to the part originally affected, producing insensible hyperæmia and nutritive changes, and resulting in thickening of the palmar fascia and the formation of contracting bands.

Fourth. Through the tissue-contraction the production of a secondary series of nervous disturbances, usually of a neuralgic character.

This hypothesis, he thought, offered a more satisfactory explanation of the manipulations of the disease than the opinion that it was essentially dependent upon the gouty diathesis, as held by Mr. Adams. In connection with the etiology, he referred to the nerve theory of acute rheumatism, as advanced a number of years ago by Dr. J. K. Mitchell, of Philadelphia, who contended that rheumatism was dependent upon peripheral irritation, and he also quoted the opinion of S. Weir Mitchell and other authorities in regard to arthropathy. Some of his cases, he said, showed the most extraordinary relief from neuralgic symptoms resulting from the operation for the finger contraction, and he had little doubt that in this affection the local condition was, as a rule, responsible for trouble that had generally been regarded as of a rheumatic character. The traumatism on which he believed the disease depended was usually so slight as to be lost sight of altogether; and where the contractions occurred in those habitually using the hands in the same kind of manipulations, it might have been only at the thousandth repetition of the act that a nerve filament became affected. The symmetry of the affection had been advanced as an argument of its being a gouty or other blood-disease; but this lost its

force altogether when it was remembered how sympathetic ophthalmia was produced through the agency of the ciliary nerves. In Dr. Keen's 105 cases, the presence or absence of the gouty diathesis was mentioned in only 48; but it was stated to be present in 42 out of the 48. This was certainly a very much larger proportion of gouty cases than he had found among his own patients, and he thought that this apparent excess of such cases was probably explainable by the fact that in by far the largest majority of the remaining fifty-seven cases there was no gout, since, if it had been present, the circumstance would undoubtedly, as a rule, have been noted. In a recent communication Mr. Adams had reiterated his conviction of the gouty origin of the disease, but it was not to be forgotten that his practice was almost exclusively among the upper classes of Englishmen, in whom gout was exceedingly common. Noble Smith, on the other hand, had found that gout was the exception, rather than the rule, in connection with Dupuytren's contraction.

In the treatment, Dr. Abbe advocated the multiple subcutaneous incisions as first resorted to by Mr. Adams. He said he had one important suggestion to make, however, and that was, not to keep up too forced extension, lest active inflammation should be set up, on the old theory, *ubi irritatio ibi fluxus*. The operation, as had been previously noted, not infrequently produced a temporary condition of the hand resembling acute rheumatism. In conclusion, he alluded to the treatment of Professor Busch, of Bonn, as described by Dr. Madelung, which consisted in the raising of a triangular skin-flap from the palm of the hand, with its base at the root of the finger, and the cutting away bit by bit of the tense fascia beneath, as the finger was being straightened; after which the flap was replaced and fixed with sutures. The finger was left free for some days after this operation, but as soon as granulations appeared, a cylinder of wood was placed in the palm for a few days, and after this the finger was extended and kept so by means of a straight splint applied to the back of the hand. This was to be removed daily, and the finger moved, and at the end of three or four weeks the hand left free. Dr. Abbe had had no personal experience with this plan of procedure, but he thought that Mr. Adams's method left nothing to be desired.

DR. R. F. WEIR said that he had had the opportunity of seeing a number of Dr. Abbe's cases, and from noting the connection of nervous symptoms with this affection he had become convinced of the correctness of his views concerning it. Traumatism, he had no doubt, was the starting-point of the whole trouble. Dr. Abbe's latest departure, in not stretching the fingers all the way back to the normal position at first, he thought a wise one, as in this way less irritation would be caused by the operation.

DR. ALFRED C. POST said that he believed he was the first American surgeon to direct attention to this subject, though of late years he had not met much with such contractions. It had often been a matter of surprise to him that before the time of Dupuytren the complaint described by him should have been mistaken for contraction of the tendons, since it was noticeable that in Dupuytren's contraction it made no difference in the position of the fingers—whether the wrist or elbow was in a flexed condition or not—which would certainly not

be the case if the tendons were affected. In his own operations he had employed open section with success. He had found no difficulty in extending the fingers, but a considerable period of time was required before flexion could be secured. All his cases had been of traumatic origin, and the affection generally occurred in those who were unaccustomed to manual labor, but who took up some kind of work for purposes of exercise or recreation in which the palm of the hand was exposed to unusual pressure, such as rowing, gardening, etc. There was thus a bruising of the palmar fascia, but there was, he believed, no gouty or rheumatic element in any of the cases. It was the tissues over the metacarpophalangeal articulation that were mainly affected, and in one instance he had found it necessary to divide the sheath of the tendon, although the tendon itself was not at all implicated in the trouble.

DR. FRANK H. HAMILTON remarked that for a number of years he had not been called on to treat such cases. He had formerly followed Dupuytren's advice in their treatment to a certain extent, but he could hardly say that his results had been altogether satisfactory. He thought Dr. Abbe deserved great credit for the enunciation of the theory which he had advanced on this occasion, and said that for many years the idea had been in his mind that this affection might perhaps be of neurotic origin. The morbid symptoms noticed seemed to him to be due to certain lesions, in consequence of which the annular tissue of the parts underwent an atrophy analogous to the contracture of tendons. In tendons, the latter process resulted in an absolute shortening, and, according to Malgaigne, it took about a year before the contracture occurred. The process, in Dupuytren's contraction, he thought, was not of an inflammatory nature, but one of atrophy, in consequence of which the skin became adherent to the fascia beneath. This would explain why a long time must intervene before power could be regained in the part. The theory of Dr. Abbe seemed to him sound on the whole, but he had to confess that there was a little doubt in his mind whether the affection were of traumatic origin in all cases. It was a recognized fact that it almost always occurred in the little and ring fingers, and in connection with this it had been pointed out that in England it was quite frequently met with in coachmen, who used their other fingers to a great extent and kept these almost constantly at rest; so that the element of traumatism seemed removed from this class of cases. In certain instances, therefore, persistent disuse apparently resulted in this atrophic condition which he believed to belong to Dupuytren's contraction.

DR. LEWIS A. SAYRE said that he had unfortunately arrived in time only to hear the very end of the paper, but as far as he was able to judge of the views of Dr. Abbe from its conclusion and the remarks of those who had taken part in its discussion, he could only give them his hearty endorsement. All the cases that he had ever met could be traced to a traumatic origin, and in every instance a certain amount of pain in the part had preceded the deformity. This pain varied in character in different cases, and in some it was rather a tingling sensation or a vague feeling of discomfort than actual pain. After it had been noticed for several months the deformity occurred. A similar explanation to that advanced by the author of the paper had seemed to him

to be the correct one; but he had never publicly expressed such views on the subject, and, like Dr. Hamilton, he thought Dr. Abbe entitled to great credit.

The treatment advised and practised by Dupuytren was not always successful, and he did not wonder that Dr. Hamilton had not been altogether pleased with it; but the plan of procedure devised by Mr. Adams was perfectly satisfactory in every way, and he had obtained the most excellent results with it. The idea of Dr. Hamilton that there was an atrophy in connection with this affection he thought a very important one, and this would explain why it was so desirable to combine systematic massage and general manipulation with the treatment. In two cases of his own he had obtained the most excellent results by these measures alone, without resorting to any operation whatever. The skilful practice of massage for half an hour twice each day, would be found of incalculable service in restoring the vitality and nutrition of the parts. Dr. Sayre also exhibited a plaster cast of one of his cases.

DR. V. P. GIBNEY stated that it had been his good fortune to see the cases in which Dr. Abbe had operated both before and at different times after the operation, and he could bear witness to the very gratifying character of the results obtained. He had had one or two cases himself, and the painful and distressing neurosis with which they were accompanied left no doubt in his mind of their neurotic origin. In club-foot also, when the fascia was very tense, he had adopted Adams's plan, with very good results.

DR. A. L. RANNEY spoke in confirmation of the extent of the palmar aponeurosis, especially as regards the thumb, as claimed by Dr. Abbe in his paper, and said that he had verified it by his own dissections. Dupuytren's contraction, he went on to say, occurred in women more frequently, he believed, than was ordinarily supposed. Thus, Dr. Keen, in a subsequent communication, had reported twelve or fifteen additional cases in females; which would bring the proportion up to about one case in five. He could not but subscribe to the neurotic origin of the affection, and said that he believed Adams and Rowe's gouty hypothesis was untenable. Dupuytren himself had reported two cases in which the disease was congenital, and as he had never yet heard of a young infant being affected with gout, these seemed to him to argue against such an origin. The question of traumatism as a cause of neurotic trouble was one of interest, and he was inclined to take somewhat the position of Dr. Hamilton in regard to it. No one to-day, he thought, doubted the neurotic origin of writer's cramp; yet this was due to spinal irritation without traumatism. He himself had suffered from the affection, and in very many cases he had found that it occurred in those who were accustomed to do only an ordinary amount of writing.

That the part of the hand supplied by the ulnar nerve was more often affected was due, he believed, not to the cause assigned by Dr. Hamilton, but to the fact that the ulnar nerve was more exposed to injury than the radial. Thus, it was exceedingly common for men particularly to lean on the elbows, and the nerve at this point was peculiarly liable to be pressed upon. As a whole, he believed Dr. Abbe's views were correct; but it might, perhaps, be well not to insist on their absolute applicability to every possible case. There was always

more or less danger, in taking up a new idea, of attempting to carry it out too far. Might not compression of a terminal nerve-filament, rather than continued hyperæmia, sometimes result in the contraction in question? In some cases, again, the gouty diathesis might perhaps, be a very important element in the etiology. That the affection was often symmetrical, however, pointed, he thought, rather to its neurotic than its gouty origin. Every one was familiar with the effect produced simultaneously upon the circulation of both ears of a rabbit by pinching one of them, which effect was due to a spasm of the vaso-motor nerves. A distinct anastomosis between the two anterior columns of the spinal cord had now been established, and therefore it was not difficult to see how a compression of the ulnar nerve, for instance, in one upper extremity, should produce the same results in both.

DR. AMIDON spoke particularly of the brilliant results achieved in Dr. Abbe's second case, in which the patient suffered so long and so severely from the trouble in the back, and in which he himself, in connection with Dr. Seguin, had tried so many different measures without affording any satisfactory relief. He then went on to say that, with Dr. C. H. Knight, he had seen that day a very interesting case of contraction of both ring fingers. The patient was a man, sixty years old, who, up to the age of forty, had pursued the occupation of a waiter, but for the last twenty years had been a drayman, and constantly accustomed to handling a bale-hook. The contraction in the right hand was of eight years' duration, and that in the left hand of two or three years. There was also a peculiar neurotic history in the case. Within the last two weeks the patient had had two attacks of sudden failure of power in both lower extremities, but without any loss of consciousness, or true paralysis, either of motion or sensation. The first one occurred in the evening, and he was not able to stand on his legs until ten the following morning. The second attack of loss of power of standing lasted only about two hours. The coincidence of this neurotic trouble with typical Dupuytren contraction of a symmetrical character, seemed to him of considerable interest.

DR. POST remarked that the explanation of the more frequent occurrence of the affection in the little and ring fingers seemed to him to be due to the fact that the portion of the palm of the hand with which they were connected, what was known as the thenar eminence, was more exposed than the rest of the palm, to blows or pressure, as in rowing, handling tools, walking with a cane, etc.

DR. ABBE stated that it afforded him great pleasure that his paper should have elicited so interesting a discussion, and also that his views should have received the endorsement of so many of those present. It was his conviction that, scattered throughout the country, there were a great many cases of Dupuytren's contraction, in which it was believed that the tendons were actually contracted, and, therefore, that nothing could be done for their relief. After Madelung had published the account of Busch's successful operations, crowds of such patients came flocking to Bonn, and received the benefit which surgical interference was able to afford, and which they had hitherto supposed it was impossible to obtain. After Dr. Post published his cases eight or

nine years ago, the subject had been allowed to drop to a great extent from the mind of the profession, until it was recently revived by the London surgeons and the interesting contribution of Dr. Keen, of Philadelphia, referred to in the paper. In his remarks, Dr. Post had spoken of the slow return of flexion after the operation. This was a very noticeable feature of these cases, and the reason for it was that the fibrous tissues became so hardened in this affection that it took a year or more to restore the parts to their normal condition. He could not agree with Dr. Hamilton that there was simply atrophy present, but believed that there was positive inflammation, commencing in hyperæmia and resulting in more or less hyperplasia. Dr. Sayre, he thought, had over-rated the importance of massage in this disease, even in its early stages; since, in his fourth case, upon which he operated eleven weeks ago, the patient, who had been affected with it for fifteen years, had faithfully tried this, in addition to many other measures for relief. Massage, however, he thought, was much preferable to stretching. Dr. Ranney's idea, that the ulnar nerve, which supplied the fingers most likely to be affected, was peculiarly exposed to pressure, seemed to him a very suggestive one. That the peripheral nerve filaments were sometimes involved, was probably true, but he thought that there was a real nerve lesion, and not merely a sensory impression.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 8, 1884.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

LIGATION OF THE SAC IN STRANGULATED HERNIA.

DR. J. C. HUTCHISON reported two cases of strangulated hernia in which he had operated recently. Both the patients were females. One hernia was femoral and the other a direct inguinal. After dividing the stricture and returning the contents of the sac, he surrounded the sac in one case with a carbolized silk ligature, and then cut it off. The first patient had recovered entirely, and the second, still under observation, was doing well; her temperature at no time having been above 99°. He made no attempt to close the ring.

DR. T. M. MARKOE then read a paper entitled

SARCOMA OF SYNOVIAL SHEATHS.

(See page 464.)

At the close of the reading of the paper, he referred to a case in which Dr. W. T. Bull had opened the knee-joint for the removal of a loose cartilage. The body was found imbedded in the edge of one of the synovial fringes, which floated into the wound as the turbid, bloody serum contained in the joint flowed out. The body was spherical or ovoidal in shape, about as large as two peas, and of a cartilaginous hardness. On section after hardening, the microscope showed the tumor to be composed of some small round cells, many spindle cells, and a large number of giant cells, marking it as a sarcoma giganteo-cellulare as Virchow terms these tumors, or, as they are more familiarly known, as the myeloid sarcoma of Paget. The case seemed to Dr. Markoe to have an interesting analogy to those which he had related.

Microscopical sections, prepared by Dr. Peabody, illustrating each of the tumors described were then exhibited.

THE PRESIDENT said that he had the good fortune to see one of the cases which Dr. Markoe had related, and shortly afterwards he had a case which he saw at his clinic at the College of Physicians and Surgeons. A young Italian girl presented herself with an obstinate broad ganglion on the dorsum of the hand near the wrist. The patient subsequently entered the New York Hospital, and was operated upon by Dr. Peters. The tumor was found to encircle the tendons. She had been seen lately by Dr. Abbe, who reported a recurrence of the growth. Microscopically the neoplasm was sarcomatous.

FRACTURE OF THE NECK OF THE FEMUR.

DR. A. C. POST said that he had recently seen a case which illustrated the difficulty which is occasionally observed in the diagnosis of fracture of the neck of the femur. Two weeks ago a lady, about seventy-seven years of age, a well-preserved and healthy person, fell one or two steps going down stairs, and immediately afterwards was unable to walk, and complained of pain in the region of the hip, but did not send for him until the next evening. When he saw the patient she was lying upon her back, the affected limb appeared very slightly everted, but on careful measurement he could not detect any difference in the length of the two limbs. He gave a guarded diagnosis, and said that there was possibly a fracture of the neck of the femur without separation of the fragments, and advised the patient to remain quiet. He visited her several times afterwards and found her in about the same condition, except that she gradually grew more comfortable, was able to move about in the bed without much discomfort, and after the lapse of about ten days, everything going on favorably, he nearly abandoned the idea that fracture had occurred. He therefore allowed the patient a little more liberty, such as sitting in a chair, and by the aid of assistants she might move a little about the room, and she did so.

Dr. Post saw the patient this morning, found her sitting on a chair, complaining of no pain, and with his assistance and the aid of an umbrella used as a cane, she was able to walk very slowly across the room. This evening he received an urgent call to see her, with the statement that she had suddenly become very much worse, was suffering severe pain, and when he reached the case he found that there was more marked version of the foot, and that there was shortening of the limb to the extent of about seven-eighths of an inch. The account given was that while sitting up some friend called, and suggested that she raise her foot and place it in another chair, which she did, and was not conscious of having injured the limb, but when she attempted to return to the bed, she immediately began to suffer from severe pain, and Dr. Post found the condition described, which did not exist at his morning visit. He then reached the conclusion that it was originally a case of fracture of the neck of the femur without separation of the fragments; that the fragments were held together by the thick periosteum of the neck, and probably the movement made when she raised her foot and placed it in another chair separated the fragments and allowed them to pass by each other.

He also recalled a case which occurred many years ago in the old New York Hospital. The patient was brought in after having received an injury, and he was unable to make out any shortening of the limb, although there was some eversion and a good deal of lameness. He gave the patient the benefit of the doubt concerning fracture, and did not make any extension or special manipulation for the purpose of diagnosis. It was near the end of his term of service, and he was followed by one of his colleagues, who, when he came on duty, was anxious to have a clear diagnosis, and therefore proceeded to make some extension and further manipulation of the limb, and subsequently there was no doubt whatever concerning the nature of the injury.

Dr. Post had been in the habit of treating such cases as cases of fracture until the diagnosis became clear, or until the patient got well. He thought that the case reported suggested the great importance of caution in that respect, and of being contented with uncertain diagnosis rather than subject the patient to the danger of separation of the fragments, which cannot afterward be brought together.

THE PRESIDENT remarked that Dr. Post's case of fracture of the femur was very interesting and practical in several particulars, especially with reference to the difficulty in making a diagnosis, which, in more than one instance, he had himself experienced. He thought that where the patient is thin, and Bryant's line can be made out distinctly, and there is, also, a relaxation of the fascia lata, sometimes a diagnosis can be made clear in this manner; but he had to confess that, practically, the rule laid down by Dr. Post must be followed, and that the case should be regarded as one of fracture until such a period had elapsed as would show unquestionably that only a contusion of the muscles had existed. Attempts to elicit crepitus should be made with great caution.

DR. L. A. STIMSON thought that the need of caution might be formulated even more strongly, and it might be said that when an elderly patient has fallen and struck upon the hip, with consequent inability to use the limb, unless absence of fracture can be positively made out, a diagnosis of fracture should be made; and the absence of fracture can only be asserted when all its minor indications are absent; as Prof. Bigelow has pointed out, when no eversion can be recognized, there may be diminished inversion. Another sign, recently pointed out by a French surgeon, Hennequin, which Dr. Stimson had never failed to find in any case of fracture at the hip-joint since he had learned to look for it, was a lack of depressibility of Scarpa's space—that is, the fingers can be pressed into that space less deeply than normal, and the manipulation is always accompanied by pain in cases of fracture.

A case came under his observation a few days ago, in which there was no eversion, no shortening, but there was inability to use the limb. There was a fullness of Scarpa's space, and he was able, by gently flexing the limb to a right angle with the pelvis, and pressing on the trochanter, to get a single click of crepitus, which made the diagnosis complete. He had been unable to get the crepitating click with the limb in an extended position.

Dr. Stimson asked the President if he had noticed the lack of depressibility of Scarpa's space.

THE PRESIDENT replied that he had tried it in only two cases, and it was present in each instance, but that he did not rely upon it as a pathognomonic system.

He also supplemented the case by proposing an inquiry with regard to the treatment of impaction with extreme eversion. He had seen two cases in which the eversion was so marked in subjects under fifty years of age, that he was strongly tempted to break it up, so as to get a better position for the limb; but he did not dare to do so, and the result apparently justified him in his decision, because the patients subsequently walked fairly well—much better than he expected they ever would.

DR. J. C. HUTCHISON said that in his own case, an impacted fracture of the femoral neck, there was at first great doubt whether or not fracture had occurred. He was carefully measured by three competent surgeons, one of very large experience, who made out three-fourths of an inch shortening; one of the others found some shortening; the third examined in the presence of the other surgeons, and also alone several times, and was unable to make out any shortening. Dr. Hutchison had the conviction that he had an impacted fracture, but he was not satisfied that a fracture had occurred until six or seven hours after the receipt of his injury, when symptoms developed which convinced him that a fracture had occurred, namely, spasmodic contraction of the muscles about the hip, when he fell asleep, which continued from time to time for a week. He was disposed to regard the presence of muscular spasm about the hip-joint, after severe injury of that part, as pathognomonic of fracture, but fracture here often exists when this symptom is absent. On the following day two of the three gentlemen had no doubt concerning the existence of a fracture. The fragments did not separate although he was removed from Lake George to his home soon after the injury. Dr. Hutchison agreed with the opinion expressed by other members, that when the diagnosis was doubtful in injuries about the hip, the case should be treated as one of fracture.

INTESTINAL OBSTRUCTION.

DR. POST related a case of intestinal obstruction to which he was called on the twelfth of March. The patient was a previously healthy man, thirty years of age, and when Dr. Post first saw him the abdomen was very much distended, with tympanitic percussion noted everywhere except over the ascending colon, where there was a moderate degree of dulness without marked hardness upon palpation. The patient had had no movement of the bowels for four days. There was a moderate amount of fever with considerable tenderness, and the pain was quite acute. He directed an enema prepared by infusing two ounces each of senna and Glauber's salt with half an ounce of cardamom seeds in a quart of boiling water, and ordered that one-half of the enema be administered, to be followed by an opiate. On the following morning he found that the patient had had an imperfect evacuation following the enema, and Dr. Post directed that the other half of the infusion be given, which brought away some solid matter with the liquid. Partial relief was afforded, but there was evidently a large accumulation of gas in the intestine, and he therefore directed, on the following day, that half an ounce of oil of turpentine and one drop of Croton oil,

added to a pint of flaxseed tea, be used as an injection, and it gave the patient complete relief, producing several copious evacuations, and the swelling of the abdomen subsided. The patient improved so steadily that on the eighteenth of March he discontinued his visits.

Six days afterwards, the patient's wife called, saying that her husband was suffering again, and that a hard swelling appeared the day after Dr. Post discontinued his visits, which had continued, and that his bowels had not been freely moved. Dr. Post found that there evidently was a phlegmon forming in the region of the caecum. A swelling existed there larger than his fist, and there was dullness on percussion. Although there was no distinct fluctuation, it was evident that the tumor was tending toward the formation of pus. He concluded to perform the explorative operation of Dr. Willard Parker, and, on the 25th of March, he made an incision, separating layer after layer, until he reached the immediate vicinity of the hardened mass; and, not detecting fluctuation, he made an antiseptic application—bichloride solution, eight grains to a pint—over the wound, and from that time the patient began to experience relief. In the course of two or three days, there was a moderate discharge of pus from the wound, and the hardness subsided. The patient is now in a very good condition, and in a fair way to recovery. The discharge had been carefully inspected, but no foreign body had been found.

It was on the sixth day after hardness had been observed that Dr. Post made the incision, and he anticipated, he thought, somewhat the actual formation of matter which readily found its way into the artificial opening. He regarded it as safer to proceed in this manner, rather than to take the chances of an abscess opening into the peritoneal cavity.

THE PRESIDENT remarked, with reference to Dr. Post's case of perityphlitis, that he had recently seen a case occurring in a young person, twenty-two or twenty-three years of age, in which the especially interesting features were the presence of normal temperature and resonance on percussion over the tumor. At first there was some fever, with constipation of the bowels and severe abdominal pain; but these symptoms soon disappeared, and after the temperature fell to the normal, the tumor first showed itself, and when he saw the case yesterday in consultation, the pulse was eighty-four, the temperature was normal, the tumor was in the right iliac fossa, but extending well up towards the median line, and was resonant on percussion. He had once seen a similar case under the care of the late Dr. Gurdon Buck, and the explanation which Dr. Buck gave with reference to resonance on percussion was the presence of gas in the cavity of the abscess.

In the present case the diagnosis was made sure by thrusting in a hypodermic syringe, which withdrew pus, and afterwards an incision was made in the line of puncture, and gas and pus abundantly evacuated. No foreign body was found in the cavity. The discharge was exceedingly offensive, although the pus had a good color.

DR. C. K. BRIDGON had seen two or three cases of perityphlitic abscess in which there was resonance over the tumor, and the gas which escaped was also very offensive in character. He had also seen a case of iliac abscess as described by Dr. Buck, which was filled with

gas, and for the relief of which he performed the operation devised by Dr. Buck, namely, to operate below Poupart's ligament, extending the incision down to the tendons of the psoas and iliacus muscles, opening the fascia over these tendons, and passing the finger up underneath the fascia into the iliac fossa. In this instance he passed his index finger to its entire length without getting any response, he then took a female catheter and introduced it to nearly its entire length when there came a full puff of offensive gas, and he had the impression that he had punctured the intestine, but it was not so, for the puff was quickly followed by a large discharge of pus. The patient recovered. He eventually died, however, of tuberculosis.

DR. POST referred to a case of intestinal obstruction due to impaction of feces in the rectum, occurring in a woman eighty-five years of age. She had gone repeatedly to the water-closet, and had passed small quantities of mucus. On digital examination the rectum was found to be filled with a solid mass of fecal matter. Portions of this were removed with the handle of a spoon, and this was followed by a warm water enema which gave complete relief.

Dr. Post also referred to a case of constipation in a lady who had given birth to a child twelve days before. She had had frequent liquid evacuations, and her attending physician had regarded it as a case of diarrhoea, for which he had prescribed opiates. When Dr. Post was called, he made a digital examination and found scybala in the rectum. The patient was relieved by an active cathartic.

The Society then proceeded to the transaction of miscellaneous business.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Eighty-sixth Annual Meeting, held in Baltimore, April 22, 23, 24, and 25, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, APRIL 22, FIRST DAY.

THE Faculty convened shortly after 12 M. in Hopkins Hall of the Johns Hopkins University, THE PRESIDENT, RICHARD MCSHERRY, M.D., in the Chair.

After the transaction of some routine business, DR. MCSHERRY delivered

THE PRESIDENT'S ADDRESS.

He commenced by referring to the time-honored custom that required him to give an address at the opening of the convention, and proceeded to speak of the many changes that had come about in the Faculty, not only since its foundation, but since he became a member, thirty-three years ago. Amid all other changes one change has been constant, "The shears of Atropos have been busy clipping the life-threads of our fathers and brothers." We are never allowed to forget the fact so forcibly expressed by the Latin poet:

"Debemus morti nos nostraque."

Speaking of the progress of medical science, the President said that while keeping pace with all true progress, we should at the same time "keep in perpetual use a sort of mental winnowing machine, to separate

the wheat from the chaff so abundantly placed before us." Neither personal observation alone, nor scientific research alone, should be trusted to, but the utmost use should be made of both, ignoring neither the wisdom of the past nor the discoveries of to-day. The President expressed himself strongly in favor of the Code of Ethics of the American Medical Association, and hoped that the profession of the State would continue as united as they have been on this subject. Code or no code, how can a scientific physician consult with one with whose system he has nothing in common? We may use all agencies for the cure of disease, but bind ourselves to no narrow system. Politics and medicine do not blend well together, but on matters of sanitation the physician should use his influence—such as public health, drainage, quarantine, etc. The President also spoke of the need of protecting physicians in regard to testifying in court where professional confidence is involved. The address closed with remarks on the need of enlarged accommodations for the growing library.

THE REPORT OF THE TREASURER

was then read. Dr. Judson Gilman, who had for many years acted as Treasurer to the Faculty, had died during the past year, and the report was made by the Treasurer elected by the Executive Committee to fill his place, viz., Dr. W. F. A. Kemp. The report showed that notwithstanding the increased expenses this year, caused by the publication of the volume containing the *Medical Annals of Baltimore*, the financial condition of the Faculty was good and the indebtedness small—\$1340.60 in all having been collected during the year.

Dr. B. B. BROWNE, Chairman, read the

REPORT OF THE LIBRARY COMMITTEE.

After reviewing the work of the last ten years, it stated that since the last report, 673 volumes have been added by purchase, donation, and exchange.

THE COMMITTEE ON MEMOIRS,

Dr. EUGENE F. CORDELL, Chairman, reported the death of two members of the Faculty since last year: Dr. Judson Gilman, aged 65, and Dr. E. Gover Cox, aged 63. Dr. GILMAN was for more than thirty years a member of the Faculty, and has acted as its Treasurer since 1870. His wise and discreet financial management was much valued. He rendered efficient service during the epidemic of yellow fever in Norfolk, in 1855, and visited that city as a Commissioner of the Board of Health of Baltimore, to investigate the origin and nature of the disease. Dr. E. GOVER COX removed to Baltimore in 1852, and continued to reside there until his last illness. He paid special attention to the treatment of diseases of women, in which he acquired great skill and success. He took an active interest in the working of various beneficial organizations, and was especially prominent in the Order of Odd Fellows.

Dr. G. LANE TANEYHILL, Chairman, read the

REPORT OF THE PUBLICATION COMMITTEE.

The report showed that, in addition to the publication of the usual volume of *Transactions*, the committee had published, according to the direction of the Faculty, the *Medical Annals of Baltimore*, which had been prepared with great labor by Dr. John R. Quinan.

Dr. J. E. MICHAEL, Chairman of the Section of Surgery, read

THE REPORT ON SURGERY.

He first took up the subject of *Antiseptic Surgery*. If the latter part of the nineteenth century will be celebrated in the future annals of surgery, it will be for the triumph of antiseptics and of the germ theory of wound diseases. Many of us can remember how leading surgeons used to laugh at the antiseptic plan introduced by Lister. Now it is not a question whether antiseptics shall or shall not be used, so much as *what* antiseptic. Even the opponents of the system, who believe in "cleanliness in surgery," act on the germ theory when they cleanse their apartments with chlorine gas, and boil the water they will use for irrigation, etc., before they use it, and take other precautions of the same kind. Their success is really an argument in favor of Listerism. This term should not be confined to a special formula used by Lister, for he is really the father of all antiseptic surgery. The fact that the best germicides known are also hurtful to the human organism, and the ambition of surgeons to be the introducers of new antiseptics has resulted in many experiments in this direction, and has added much to our knowledge. A perfectly certain, and yet safe, antiseptic is still wanting. Carbolic acid is dangerous. Thymol, salicylic acid, boracic acid, even iodoform and subnitrate of bismuth have been found not to be free from objection, and corrosive sublimate, although no ill results have yet been reported, is too violent a poison not to produce at some time dangerous symptoms in those who are specially open to the effects of this salt. How to use antiseptics, is a question that must largely be answered by each surgeon for himself. The costly apparatus used by Lister would be unsuitable for country practitioners; but it is not necessary, as Lister himself has shown. A good plan is to sponge or irrigate with carbolic or corrosive sublimate solution, and dress the wound with oakum or absorbent cotton and iodoform.

The report proceeded to consider *abdominal surgery*, and noted the great advances that had been made in this direction. Turning to *cancer of the breast*, Dr. Michael said that as the view that cancer began as a local disorder gained ground, operative procedures were more frequent. The enlargement of the axillary glands is not a contraindication for operating, but they should be removed as well as the cancerous growth in the breast. Even when the disease has advanced too far to hope for a radical cure, extirpation affords relief. He said that he has now two cases on hand, in one of which he has operated three times in four years, and in the other three times in three years. In the meantime, between the operations, the patients are comfortable and attend to their family duties, and so convinced are they of the advantage of removing the diseased tissues that they return of their own accord to the Hospital as soon as the disease has made itself manifest again.

He then referred to Lister's method of *wiring the fractured patella*, and expressed the opinion that while in old cases, in which the function of the limb was interfered with, this operation promised well for restoring the function, yet in recent cases the old plan succeeds, especially if the knee be kept straight for a sufficient

length of time. Bony union is rare, but restoration of function is common.

Digital examination of the bladder, as recommended by Sir Henry Thompson, was adverted to, and the reporter then went on to speak of the treatment of *strictures of the urethra*. Passing over, in a few words, the treatment of strictures of the pendulous portion, he proceeded to those of the bulbo-membranous and membranous portion. Electrolysis is highly praised, but has not yet been thoroughly proved. The treatment by perineal section, with or without a guide, in old and obstinate cases, especially where patients show that peculiar tendency to chills after manipulation, has much to recommend it, though it is often difficult and tedious. Dr. Michael considers it far safer than the internal operations. He reported a case on which he had operated without a guide in last January. The patient had severe chills after manipulation, and had become very weak and seemed on the verge of the grave. Now he is going about, constantly improving; the perineal wound is nearly healed. He passes a good stream of water, and uses a No. 16 E. steel sound.

The Chairman of the Section on Practice being absent, the reading of his report was postponed, and DR. ROBERT W. JOHNSON read a supplementary report on

CRYPTORCHIDISM,

in which he entered very minutely into the history of the subject, and spoke of the effect this condition may have upon the mind of the unfortunate man—referring to the case of Sir Astley Cooper's apprentice, who was so depressed that he finally committed suicide. There are several varieties of perverted development and abnormal position of the testicle: 1. There may be supernumerary testicles, with which we have nothing to do. 2. We have the class of monorchids or persons having only one testicle in the scrotum, the other in the abdomen, inguinal canal or perineum, or thigh. One healthy testicle is sufficient for purposes of reproduction. 3. More rare are the cryptorchids: no testicle in scrotum on either side. These are further divided (*a*) into those who are actually devoid of testicles, or anorchids; (*b*) those whose testicles are both in the abdominal cavity or inguinal canals; and (*c*) those who are a mixture of the other classes, *i. e.*, have one testicle in the abdomen and one in the canal. Marshall states that monorchids occur once in eight hundred examinations, and cryptorchids once in twelve thousand. The individuals thus affected are apt to be effeminate, with shrill voice, beardless, or having only down upon their faces: in short, approaching hermaphroditism. This is not always the case; there may be no apparent difference between the person so affected and an ordinary man. The most singular thing of all is that there have been cases in which the wives have never suspected anything to be wrong; in fact, some of this class are extremely lascivious.

Dr. Johnson then proceeded to discuss the causes of this abnormality and the effect on the retained testicle, and concluded by saying that, as a general rule, the testicle was apt to suffer less if retained in the abdomen than if in the inguinal canal. In the latter position it is much more exposed to pressure from various causes, often from an ill-fitting truss, and it appears that malig-

nant disease often attacks the testicle in this position. Subjectively, the influence is greater if the testicles are in the abdomen, as it affords comfort and reassurance to the man when he finds his scrotum empty to feel the missing testicle in the groin. Are cryptorchids sterile? We must distinguish between sterility and impotence; the former implies inability to beget offspring, the latter inability to have sexual intercourse. They are certainly not impotent, but are apt to be sterile, though not necessarily so. The testicle in its abnormal seat can be affected with all the ills that affect the testicle in its normal seat—orchitis, etc.

Dr. Johnson had prepared elaborate tables, of which the following is a summary:

Total number of cases,	89
Cases over 14 years of age,	66
No testicle found post-mortem,	9
Both testicles <i>may</i> have been retained in abdomen,	Uncertain.
Both testicles in inguinal canal,	18
Only one testicle in canal,	8
Seminal fluid examined microscopically,	15
Spermatozoa were found in semen (one very dubious),	3
Number having children,	10
In one case heredity was remarked where a monorchid begat a cryptorchid child.	

Dr. Johnson then related a case of his own, which he brought before the Faculty. A young man thirty-three years of age, well developed, hairy, muscular, with deep voice and full chest. He was a perfect Lothario, and quite gloried in his amours; was once in trouble on the charge of bastardy from which he escaped on the payment of a large sum of money. He claims to have had children. His mother noticed that his scrotum was empty in infancy. He is a sailor, and one day, while pulling a rope, felt something give way on his right side, which proved to be the beginning of a hernia, for which he sought treatment. The scrotum was found to be quite empty on both sides, excepting a small part of the bowel that could be felt protruding from the canal. On the first examination Dr. Johnson was able to feel the testicles presenting, but had not been able to feel them since. He examined the seminal fluid, found it lighter colored and more transparent than normal, lacking the usual smell and devoid of spermatozoa, when examined microscopically. He had repeated the examination on several occasions, and always with the same result.

As regards treatment, he said that if the testicle is retained in the abdomen, nothing can be done except to wait for its descent, which may be hoped for up to the end of the first year. If it is in the canal, moderate and gentle traction is beneficial. The traction should be frequently repeated, rather than for a long time on any one occasion. If traction is of no avail, return it into the abdominal cavity. If this cannot be done, protect it with a horse-shoe pad, and relieve the strain on the gland with an abdominal support. Keep the patient in ignorance, if possible, of his sterility.

The Chairman of the Section on Obstetrics and Gynecology being absent, his report was postponed to a future meeting, and DR. W. A. B. SELLMAN read, as a supplementary report, a paper on

THE EFFICACY OF IODOFORM IN PREVENTING UTERINE COLIC AND PELVIC INFLAMMATION FOLLOWING THE INTRAUTERINE APPLICATION OF NITRATE OF SILVER.

The paper was a practical one, and gave in detail Dr. Sellman's experience with these agents. He began by saying that, in the majority of cases of endometritis, applications of nitrate of silver (gr. lxxx ad f3j) had been the most useful agent he had used. Perfect cure or great relief followed its repeated use, and he had never seen stricture or closure of the uterine canal follow. But a serious objection to it is that not unfrequently his patients would suffer severe attacks of uterine colic either immediately after the application or within an hour, and he had seen pelvic peritonitis and ovaritis brought on by it. He then recounted a case of this kind. To relieve the colic, which was of common occurrence, he tried belladonna, opium, and hyoscyamus, without effect. Knowing the anæsthetic power of iodoform, he tried that, and has never since had any after-trouble from the application of nitrate of silver. As to the cause of the uterine colic, he said that in congestive and inflammatory conditions of the uterus there exists, as a rule, a state of hyperæsthesia, and a nervous condition of the whole organism. The application causes the cervical canal to contract, and prevents the excess of fluid from discharging into the vagina. He never had a case of uterine colic with dilated canal. Pelvic inflammation following the applications he thought due to the excess of fluid being forced into a patent Fallopian tube. He never had a fatal case, but they caused much solicitude. His method is to make the application of the nitrate of silver solution on a cotton-wrapped applicator, immediately following it with powdered iodoform applied in the same manner. Sometimes the cervical canal contracts so suddenly and violently as to prevent the applicator being passed the second time. Under such circumstances he inserts a suppository or uterine bougie medicated or charged with iodoform. He covers the cervix thoroughly with iodoform, and sometimes saturates a pledget of cotton with iodoform and vaseline, leaving a string attached for the patient to remove it the next morning. These procedures have prevented all unpleasant after-effects.

WEDNESDAY, APRIL 13, SECOND DAY.

After the routine business had been transacted, DR. A. B. ARNOLD, Chairman of the Section on Practice, read a report entitled

REFLECTIONS ON PRACTICE,

in which he passed in review the changes in the theory and practice of therapeutics which have taken place during the last half century. There have been two schools of thought in medicine, the one holding that rational therapeutics must strictly conform to scientific principles, the other that experience is the only safe guide. After passing in rapid review the work of those who prepared the way for the most brilliant epoch of medicine, the report spoke of Louis and his numerical system, which he hoped would place therapeutics upon a solid basis. This method is an empiricism pure and simple. The choice of remedies is to be decided by statistics. Admitting all that can be said in its favor, the individual peculiarities of each patient, and the

varying conditions of each case, modify the indications for treatment too much to allow the entire acceptance of this theory; still, this method is the most reliable means of discovering the relative value of a remedy in a well-defined symptom—as the use of bromides in convulsive affections.

Both the French and Vienna schools have been singularly sterile in the direction of therapeutics. Rokitsanski (1846) declaimed against the pretensions of founding a system of therapeutics on any other ground than pathological doctrines, and Skoda avowed the same views even more decidedly. These leaders had a great effect in unsettling the minds of the younger men of the profession in Germany in regard to the trustworthiness of the current methods of treatment. The promise of rational therapeutics, which should be the outcome of a thorough knowledge of pathological anatomy and chemistry, has not been fulfilled, and at present it appears to be chimerical. The teachings of this school, however, have had the effect of causing the practice of indiscriminate venesection to fall into disgrace. The radical fault in the French and Vienna schools has been to consider disease to be a physiologico-chemical entity against which remedies are to be exclusively directed. In fact, however, we have to treat not diseases merely, but diseased individuals with all their personal peculiarities.

The characteristic of English practice is to trust more to experience than to theory, and though of the two this may be safer, glaring fallacies have passed current on the authority of experience, *e. g.*, venesection. The difficulty in this direction is that the tendency of certain diseases toward recovery is overlooked, and must always form a difficulty in accurately estimating the curative powers of a remedy.

Modern standard works consider therapeutics a branch of physiological science, and the most certain advances in therapeutical knowledge are looked for from the physiological method. The paper closed with the consideration of the modern treatment of fevers as a good test and example of what has been gained in therapeutics.

WILLIAM PEPPER, M.D., of the University of Pennsylvania, then delivered the *Annual Address*, taking for his subject

SOME PRACTICAL REMARKS ON DIETETICS IN DISEASE.

Remembering the thoughtful little work, *Health, and How To Promote It*, recently published by the President, Professor McSherry, Dr. Pepper said he was led to hope that some practical remarks upon the subject of *dietetics* might not be without interest. On reviewing what he had prepared, however, he felt that the title selected was somewhat inappropriate, as he had dwelt more upon the relations of dietetic errors to the production of disease than upon the actual value of diet during the disease. Although the subject has not always claimed the attention which it merits, yet, on the whole, we must acknowledge that amidst the currents and counter-currents of medical opinion during the past decade there has been a constantly growing appreciation of the value of dietetics; indeed, we may safely assert that it is becoming recognized that in very many conditions of impaired health and actual disease successful treatment depends chiefly or exclusively upon proper diet and

regimen. He believed that from a proper study of the wide range and varied character of the morbid symptoms resulting from the gift of food abused, and the wonderful remedial effects of special forms of diet, it would appear that it is in this line more than in any other that the greatest triumphs of therapeutics are to be won in the near future. In estimating the influence of the factors of our physical life upon the development of the individual or race, too much importance has been attached to climate and far too little to diet and personal hygiene. For the establishment of the laws of dietetics and hygiene we are concerned only with the average man, not with those exceptional individuals in every community who display the highest physical and intellectual health whilst pursuing courses of life admittedly injurious.

In India and Australia we have seen the experiment of subjecting large numbers of Anglo-Saxons to climatic conditions diametrically opposite to those familiar to that race, and the result seems to be that with suitable diet and regimen its characteristic health and energy will not be impaired. In this country a more complicated experiment is being tried. A nation recruited from all quarters of the globe, a vast territory—wide varieties of soil and climate—the gift of freedom, personal, political, and pecuniary, to be borne by millions heretofore comparative strangers to these blessings. Can we wonder that during the fierce contest to be waged with strange and untried climatic, industrial, and social conditions many curious effects, physical as well as social, have been developed? The so-called typical American, with his pale, sallow face and tall, slender figure, full of the irritable restlessness bred of nervous dyspepsia, certainly differs widely from his English, Irish, or German ancestors, and the interesting question arises whether his physical peculiarities are inseparably dependent upon our climatic conditions, or upon other and transient influences. Prof. Pepper stated his deliberate conclusion that it is to the latter conditions almost exclusively that we are to attribute these results. He indicated the abuses of various articles of food and drink which are the undoubted cause of this state of things, and reiterated his opinion that this was the cause of most of the physical peculiarities commonly assigned to the American climate. He believed that with due regard to the conditions, there is no more favorable climate upon earth than our own. He deprecated, too, the excessive share which has been attributed to overwork in the production of many forms of nervous exhaustion. In his own experience, cases really induced by this cause were rare, and in the vast majority an amount of work entirely consistent with long-maintained health is rendered destructive by reckless disregard of the laws of health. It is true that the conditions of our higher forms of work in America are more difficult than in older and better organized communities, but a study of the habits of professional and business men in other countries has convinced him that the important question is really "How to live while working."

If it were possible for all to appreciate correctly their physical condition and capacity at the outset, so as to adapt their method of work to their physical requirements, we should see quite as much or more work done with infinitely fewer instances of (physical) disaster. The velocity and range of a projectile vary directly as

the initial power, and inversely as the mass to be moved. In its application to the human body this is a most pregnant truth. To adjust the actual weight of the body to the physical powers of the individual, and to render these innumerable minute processes as easy and complete as possible is the aim of dietetics and regimen and the common-sense policy of every man who aspires to work to the best advantage. The enduring capacity of a man is measured by his weakest organ only. We are able by intelligence and self-restraint to spare this weak spot, and enable ourselves to tax our stronger parts to their full extent. The weak spot is commonly at some point in the assimilative process, but by no means *usually* in the stomach or intestines, or, at least, not manifested there most clearly. Whilst the original cause of the trouble may lie there, it very often shows itself in the subsequent changes, whether interstitial or metabolic. For instance, the absence of well-marked attacks of gout long blinded our eyes to the fact that the gouty diathesis is widely prevalent in this country. It is difficult to define gout, but it seems necessary to include under this head all that large series of cases with or without marked gastro-intestinal disturbances, in which there is obstruction to and deficiency of the ulterior assimilative changes before the food reaches its final fully digested forms.

He wished to call special attention to the great frequency with which, out of the presence of one or more of these causes, there is gradually evolved the complicated condition to which it is becoming the habit to apply the name of neurasthenia, and which is too often regarded as the result of pure nervous exhaustion from overwork, and therefore requiring simply tonics, rest, and high feeding. Such cases after they have been brought up to a certain point, require a protracted course of well-ordered regimen, dietetics, and exercise. Of course, one special method of treatment can be applicable only to one special group of cases, but it is the work of the skilled physician to discover to what group any special case belongs, and to select the method of medication best adapted to it. He alluded to the special methods employed by empirics, the system of Pressnitz, and those well-known methods employed at popular spas, the waters of which are totally inert. Although unscientifically employed, these methods do succeed in certain cases which have baffled the ordinary medical resources, and prove that remarkable results may be obtained by a systematic and oftentimes extreme use of the simple agents—rest, exercise, food, drink, and bathing.

He spoke of the remarkable treatment called Schroth's Cure, now practised at Lindewiese, in Germany, which consists in an artificially induced attack of continued fever, developed by long-continued abstinence from water (thirty-six to ninety-six hours), and great restriction in diet and violent exercise, alternating with free stimulation. While undoubtedly hurtful in many cases, even this has been known to effect remarkable cures in constitutional syphilis, rheumatism, etc.

He remarked on the revival of the hot water mania, and said that the truth about it is that there are not a few cases of dyspepsia and lithæmia, of certain types of rheumatism, and gastro-intestinal catarrh, in which this remedy, combined with other simple hygienic measures, is the best cure. While hot water, taken as its advocates advise, is capable of doing harm, it will do good

in so far as it discourages the use of tea and coffee. We are advancing towards a time when for each carefully diagnosed group of cases there will be a scientifically adapted diet.

In illustration of these views, Prof. Pepper proceeded to give in detail several cases of great interest, in which patients suffering from severe disorders were greatly benefited, chiefly by attention to dietetics. One of his cases was a woman of 65, with all the symptoms of advanced fatty degeneration of the heart. Noticing that she had steadily increased in weight during her sickness, and was very fleshy, he put her on a reduced diet, and with proper medication effected entire relief of the symptoms in about nine months, during which time her weight decreased from one hundred and sixty-five to one hundred and forty pounds.

Systematic reduction is to be instituted only when symptoms clearly indicate it. When reasonable reduction of diet fails to produce a marked diminution in the weight, the patient has probably not too much weight. When body weight falls rapidly, even if symptoms subside commensurately, check it early to avoid debility. Care must be taken in reducing weight, lest a marked reduction might favor the development of some latent morbid tendency, such as tuberculosis, cancer, or scrofula. A reaction has commenced against the indiscriminate stimulation in disease advocated by Todd and his followers. In acute disease, to push stimulants and concentrated food beyond the power of the patient to assimilate, puts an additional burden upon his already weakened system. In chronic diseases, restoration of power, relief of symptoms, etc., can only be accomplished by thoroughly adjusting the diet and hygiene to the altered conditions of the state of nutrition, and then as far as possible directing our remedies to the actual indications.

DR. P. C. WILLIAMS, Chairman of the Section on Obstetrics and Gynecology, then read his report, entitled

THE USE OF ERGOT IN OBSTETRICS.

He began by considering the modern criticism upon the use of ergot in obstetrics, seeking to test this criticism by clinical facts that had come under his personal observation. Of all the fluctuations in the views of medical men, none has been more marked than in regard to the use of this drug. Many prominent obstetricians denounce its use under all circumstances in obstetrical practice. Dr. Engelmann, of St. Louis, considers it entirely unnecessary in midwifery, on the ground that grave accidents and serious injuries both to mother and child result from its use (rupture of uterus, lacerations, etc.). He would limit its administration to the non-pregnant womb. With these views Dr. Albert H. Smith entirely agreed (Amer. Gynec. Soc., Sept. 1883). Dr. Engelmann has just published in THE MEDICAL NEWS an account of two cases of rupture of the uterus, ascribing both cases to the use of ergot.

The literature of the subject presents a terrible picture of injury and death from the employment of this drug, and it requires some courage to place one's own personal experience against such an array of authority; but one can only speak of what one has seen and heard. Of course, all remedies powerful for good are powerful for evil, and the disasters referred to are generally

from the improper use of the medicine. For example, take Dr. Engelmann's second case (the first case not being described with sufficient care). The lady had been under the care of a midwife, and had been four days in labor with *shoulder presentation*, when Dr. Engelmann was called. The rupture had already occurred. On the third day a physician, who had been called in, found the os dilated, but the parts rigid and dry; an arm in the vagina. He gave ergot in drachm doses, which he repeated thrice in the half hour. He endeavored to turn, but failed; another physician tried and failed. The patient was left with orders to continue the ergot. On the morning of the fourth day Dr. Engelmann was sent for, and found the condition the same as described, and the uterus ruptured. Child was removed by disarticulation, etc., and the mother died in two hours. Of course, ergot produced rupture in such a case. In cases also in which the position is normal, but the pelvis is deformed and the pains have ceased from exhaustion of the mother, or in which there is no deformity or malposition, but the membranes are ruptured, the parts hot and dry, and the progress of the case is slow, the employment of ergot is improper and disaster must result from it.

But is ergot, therefore, always equally destructive under all circumstances? According to Stillé's statistics of Prof. Busch's cases (of Berlin), in which ergot was given for weak labor pains, 1 child in 10 died; 1 in 8 of Chatto's cases died. Drs. McClintock and Hardy in 30 difficult labors used ergot in second stage and lost 20 children. Dr. West (in defence of ergot) admitted 1 death in 8 cases. These statistics (showing in all 1 death in 7 cases), Stillé considers conclusive evidence of the destructive effect of ergot on the child when used before the close of labor.

Dr. Williams considered that, appalling as these statements are, the danger is not inherent in the drug, but depends largely upon the conditions under which it is employed. He then gave his own statistics. In 1874 he had read a paper on the use of ergot hypodermically in post-partum hemorrhage. The success obtained in these induced him to use ergot thereafter in most cases to prevent hemorrhage, and the result vindicated the wisdom of the plan. Since that time he has "*never had a case of post-partum hemorrhage to deal with.*" Since 1875 he has employed ergot in 210 cases, in 70 of these forceps were used, and in nearly all chloroform was administered. In these cases 215 children were born, with the following result:

1875,	41	cases.	No	mother	died	and	no	child.	
1876,	22	"	No	"	"	"	"	"	"
1877,	15	"	3	mothers	"	"	one	"	(twins).
1878,	18	"	No	mother	"	"	"	"	"
1879,	21	"	No	"	"	"	no	"	"
1880,	25	"	No	"	"	"	one	"	"
1881,	21	"	One	"	"	"	"	"	"
1882,	22	"	One	"	"	"	two	children.	
1883,	15	"	No	"	"	"	one	child.	
1884,	10	"	No	"	"	"	no	"	

Of the mothers (one death in forty-two), three died of puerperal convulsions, one from septicæmia, and one from exhaustion before it was possible to deliver. Of the children (one death in twenty-seven), two were twins and died from inherent debility; one was stillborn, the mother dying of uræmic coma, and being unconscious

when the doctor reached her; one, a foot-presentation, dead before seen; four were of immense size, and died from delay in effecting delivery. One of these died from an enormous hemorrhage caused by the mother leaping into bed on seeing the doctor's carriage stop at the door, the suddenness of the movement causing detachment of the placenta. The remaining three were so large and out of proportion to the pelvic capacity that death seemed inevitable. The ergot, it is fair to conclude, had nothing to do with any of these deaths. However this may be, these statistics stand in striking contrast to Prof. Stillé's, and show that the danger is not inherent in the drug, but is dependent upon the conditions under which it is given. In Dr. Engelmann's second case, the circumstances under which it was given made disaster inevitable.

Ergot should never be given in a *shoulder presentation*, or, on general principles, in any malposition of the child, unless followed immediately by chloroform and other active intervention to terminate labor. It should never be given in the first stage of labor unless the os and vagina are fully dilated or easily dilatable—never in any stage of labor where the head is too large for the pelvis, unless forceps be used immediately. It may be given in the first stage where the above-mentioned restrictions are not present. The same rules apply in the second stage (the vagina and perineum must be distensible and elastic). With the above restrictions it may be given in any stage of labor, when pains are feeble. In *every* case in which ergot has been given and the head ceases to descend, or recedes between the intervals of pain, forceps must be applied at once. Delay, under these circumstances, is a fruitful source of danger. It was failure to observe this rule that led to the frightful mortality in Drs. McClintock and Hardy's cases, in which ergot was given and the labor left to itself without instrumental assistance.

It is Dr. Williams's custom to relieve the pain of childbirth in almost every case by the administration of chloroform, and as this drug is thought to weaken the pains and favor hemorrhage, he thinks it wise to be on the safe side, and, therefore, administers ergot, before giving chloroform, in every case in which it is not contraindicated by some of the conditions above mentioned. He also gives ergot to maintain uterine contraction after labor to guard against post-partum hemorrhage and against septic absorption. Since he adopted this rule (1875), he has had *no case of post-partum hemorrhage, and but one case of septicæmia*.

DR. OPIE, in opening the discussion, spoke of the difficulty of discovering by touch or other exploration the relation between the head of the child and the capacity of the straits. Should delay in relief by forceps occur after the administration of ergot, danger will ensue. The action of ergot is counteracted by full anæsthesia, so that we run the risk of hemorrhage before it acts when we give chloroform. Ergot does not act for about forty minutes.

DR. WILSON said that he never gives ergot before delivery, except when certain that the child will be delivered in a few moments. It is impossible to tell whether delivery is possible; there may be unexpected difficulty. After labor, he uses it to prevent septicæmia; but, in his hands, it is not to be depended on for post-partum hemorrhage.

DR. JOHN MORRIS agreed fully with Dr. Williams. In two thousand obstetric cases he had only seen two deaths that could be traced to the use of ergot.

DR. BRANHAM drew attention to the fact that ergot causes danger to the child because it produces, not the normal contractions of the uterus, but tonic contractions. It is this faculty that makes it useful in the prevention of septicæmia and post-partum hemorrhage.

DR. WILLIAMS, in reply, said that he had guarded the point of the danger of ergot in cases in which there was a disproportion between the head of the child and the size of the pelvis. In regard to the unexpected difficulties that might cause dangerous delay in the delivery of the child by the forceps after ergot had been administered, he would refer to his own cases: out of seventy deliveries by forceps, there were only three cases in which such delay could have caused death. In one case, only Cæsarean section could have saved the child. It was large, and the sutures of the cranium were firmly united. An examination of the causes of death in the remaining two instances convinced him that ergot had not caused it. By administering ergot before delivery, time is given for its full physiological effect to take place by the time the child is expelled. He did not think the entire absence of post-partum hemorrhage in his cases since he adopted his present practice (in 1874-75) could have been accidental.

NEWS ITEMS.

WASHINGTON.

(From our Special Correspondent.)

THE AMERICAN MEDICAL ASSOCIATION will hold its thirty-fifth annual meeting in Washington, beginning on Tuesday, May 6th. The Association will be called to order in the Congregational Church, corner of Tenth and G Streets, at 10.30 A. M., by Dr. A. Y. P. Garnett, Chairman of the Committee of Arrangements, who, after the induction into office of the President-elect, Dr. Austin Flint, will deliver the Address of Welcome.

The Reports of the Committee of Arrangements, and of the Committee on Credentials will be presented, and then Dr. Austin Flint will deliver the Annual Address, after which the reports of special committees and new and miscellaneous business will be in order.

SECTIONS.

The Sections will meet in the afternoon at 2.30 o'clock, and the following papers will be read:

Section on Practice of Medicine (Main Hall, Room A, Congregational Church). A Contribution to the Clinical Study of Epilepsy, by Prof. William Pepper, of Philadelphia. Simulation of Pathognomonic Signs and Symptoms, by Edward G. Janeway, M.D., of New York. Dermatitis Herpetiformis, by Louis A. Duhring, M.D., of Philadelphia. The Etiology of Pericarditis, by James T. Whittaker, M.D., of Cincinnati. Importance of Uniformity in the Pharmacopœia, by D. W. Prentiss, M.D., of Washington. The Germ Theory of Disease, by H. O. Marcy, M.D., of Boston. The Production of Poisons by Microorganisms, by G. V. Black, M.D., of Illinois. The New Official Chlorate, by Traill Green, M.D., of Pennsylvania. Irritation of the Capsule of Glisson, by R. Harvey Reed, M.D.

Section on Obstetrics and Diseases of Women (Room B, Congregational Church). Desperate Surgery among Women; the Proper Field for It; Who Should and Who Should Not Attempt It; by R. S. Sutton, M.D., of Pennsylvania. Mechanical Methods and Appliances in Uterine Dislocations and Distortions, by H. F. Campbell, M.D., of Georgia. The Treatment Proper to Cancer of the Uterus, by W. M. Polk, M.D., of New York. Surgical Operation for Cancer of the Uterus, by W. H. Byford, M.D., of Illinois. The Effects of Trachelorrhaphy, by J. Taber Johnson, M.D., of Washington, D. C. The Rectal Diseases of Women, by Edward M. Jenks, M.D., of Illinois.

Section on Surgery and Anatomy (National Rifles Armory, 2d floor, Room C, G St. between 9th and 10th). Treatment of Compound Fractures, by Frederick S. Dennis, M.D., of New York. On Railroad Injuries of the Extremities of the Human Body, with Observations on the Site of Amputation and Subsequent Treatment of the Stump, by T. R. Varick, M.D., of New Jersey. Tracheotomy in Diphtheria, by Charles A. Leale, M.D., of New York. Amputation at the Hip-joint, with a Review of the Various Methods of Controlling Hemorrhage, by C. A. Wheeler, M.D., of Minnesota. The Excision of Nasal and Naso-pharyngeal Polypi by a New and Easy Method, by Joseph Ransohoff, M.D., of Ohio. On Twelve Months' Surgical Experience at the London Temperance Hospital, by A. Pearce Gould, M.D., F.R.C.S., of London.

Section on State Medicine (Room D, cor. 6th and F Sts.). Sensationalism and Dogmatism in Sanitary Matters, by H. Leffmann, M.D., of Pa. Jewish Hygiene and Diet, from the Talmud and other Jewish Writings, heretofore Untranslated, by C. H. VonKlein, M.D., of Ohio.

Section on Ophthalmology, Otolaryngology, and Laryngology (Room S, Congregational Church). Neoplasms of the Lachrymal Glands, by J. N. Mackenzie, M.D., of Baltimore. A Modified Prismscope, by T. E. Murrell, M.D., of Arkansas. A Case of Sympathetic Neuroretinitis, by Samuel D. Risley, M.D., of Pa. Diagnosis in Ophthalmology, by E. Williams, M.D., of Ohio. The Use of the Cresson Water in the Treatment of Catarrhal Affections of the Mucous Membranes of the Upper Air-passages, by Carl Seiler, M.D., of Pa.

Section on Diseases of Children (Room F, Congregational Church). The Significance of Bloody Discharges from the Bowels in Young Children, by F. Woodbury, M.D., of Pa. Septic Jaundice of Children in Parturition, by M. P. Hatfield, M.D., of Ill. Congenital Encephalocele, by J. H. Duncan, M.D., of Mo. Diphtheria, Based upon Analysis of One Hundred and Twenty Cases with a Mortality of Seven, by J. W. Brown, M.D., of New York.

Section on Oral and Dental Surgery (cor. 6th and F Sts.). The Removal of Tumors from the Upper Jaw, by Reuben A. Vance, M.D., of Ohio. Importance of, and Treatment for Assuring Healthy Dentine Over Endangered Pulp, by Jacob L. Williams, M.D., of Mass.

WEDNESDAY, MAY 7TH. GENERAL SESSION—10 A. M.

Announcement of Nominating Committee.

Report of the Committee on Securing more Competent Medical and Sanitary Service on Board Trans-oceanic Passenger Vessels, by A. N. Bell, M.D., Chairman.

11 A. M.—Address of the Chairman of the Section of

Practice of Medicine, Dr. J. V. Shoemaker, of Philadelphia.

12 M.—Address of the Chairman of the Section of Obstetrics and Diseases of Women, Dr. T. A. Reamy, of Cincinnati.

New and Miscellaneous Business.

SECTIONS.

Section on Practice of Medicine. Clinical Study of the Heart Sounds, by Austin Flint, M.D., of New York. Primary Cancer of the Brain, by Roberts Bartholow, M.D., of Philadelphia. The Pathology of Myocarditis, by Wm. H. Welch, M.D., of New York. The Dietetic Treatment of Diabetes Mellitus, by Austin Flint, Jr., M.D., of New York. Phthisis, Its Successful Treatment, by J. P. Miller, M.D. The Milk Treatment of Disease, by James Tyson, M.D., of Philadelphia. Irregular Apoplectic Attacks from Other Causes than Hemorrhage and Embolism, by Gaspar Griswold, M.D., of New York. Occult Cause of Disease, by W. L. Schenck, M.D. The Advantages of Massage in Rheumatic Gout, by Douglass Graham, M.D., of Massachusetts.

Section of Obstetrics: Puerperal Septicæmia, by Theophilus Parvin, M.D., of Philadelphia. Subject to be Announced, by George J. Engelmann, M.D., of St. Louis. A Contribution to the Relation of Ovulation and Menstruation, by A. Reeves Jackson, M.D., of Illinois. The Management of Protracted Labor, by Wm. H. Taylor, M.D., of Ohio. The Use of Hot Water in the Treatment of Cystitis in the Female, by S. C. Dudley, M.D., of Illinois. Does the Use of Ether in Parturition Increase the Danger to the Child, by Ellwood Wilson, M.D., of Phila. The Use of Chloroform in Labor, by J. Herbert Claiborne, M.D., of Virginia.

Section on Surgery and Anatomy: Tuberculosis of Bones and Joints, and its Treatment by Ignipuncture, by Roswell Park, M.D., of Buffalo. Is Carcinoma Mammæ Curable by Operative Procedures? by Charles B. Nancrede, M.D., of Philadelphia. An Earthy Calculus in the Substance of the Liver, by Wm. A. Byrd, M.D., of Illinois. On Bronchial Cysts of the Neck, by N. Senn, M.D., of Wisconsin. Intestinal Paralysis Consequent upon Acute Pressure, by P. S. Conner, M.D., of Cincinnati. The Treatment of Hydrophobia, Historically and Practically Considered, by C. W. Dulles, M.D., of Philadelphia.

Section on Ophthalmology, Otolaryngology, and Laryngology: Influence of Climate on the Treatment of Chronic Catarrh of the Middle Ear, by J. F. Fulton, M.D., of Minnesota. Epistaxis, by D. N. Rankin, M.D., of Pennsylvania. A Combined Visual and Astigmatic Test (Snellen's Type), Based on the Confusion Letters of the Astigmatic, by W. S. Little, M.D., of Philadelphia. Report on the Diseases of the Ear in Locomotive and other Engineers, Firemen, and Conductors, which may Endanger the Lives of the Travelling Public, by Laurence Turnbull, M.D., of Philadelphia. A Preliminary Report upon the Causes of Blindness, by C. M. Hobley, M.D., of Iowa.

Section on Diseases of Children: Remarks on the Feeding of School Children, by Louis Atlee, M.D., of Pennsylvania. Enlarged Tonsils, and How They Should be Treated, by Dudley S. Reynolds, M.D., of Kentucky. A Unique Case of Hydrancephalocele, by George W. Rachel, M.D., of New York.

Section on Oral and Dental Surgery: Sponge-grafting, by E. C. Briggs, M.D., of Mass. The Removal of Stains from the Teeth Caused by the Administration of Medicinal Agents, and the Bleaching of Pulpless Teeth, by A. N. Harlan, M.D., of Illinois.

THURSDAY, MAY 8TH. GENERAL SESSION.

Report of Committee on Nominations.

Report of Standing Committee on Meteorological Conditions and their Relations to the Prevalence of Disease. Also concerning the subject of Collective Investigation of Disease in coöperation with the Committee of the British Medical Association. By N. S. Davis, M.D., Ill., Chairman.

11 A.M.—Address of Chairman of the Section of Surgery and Anatomy, Dr. C. F. Parkes, of Chicago.

12 M.—Address of the Chairman of the Section of State Medicine, Dr. J. Roberts, of Nashville.

Report of the Treasurer.

Report of the Librarian.

Report of the Committee of Publication.

Miscellaneous Business.

SECTIONS.

Section on Practice of Medicine: Tuberculosis, by Henry F. Formad, M.D., of Phila. Retardation of the Pulse in Mitral Insufficiency, by A. T. Keyt, M.D., of Ohio. Specific Treatment of Diphtheria and Croup, by G. A. Linn, M.D. Muscular Hypertrophy of the Stomach, by Alexander Marcy, Jr., M.D. Etiology of Enteric Fever, by S. K. Crawford, M.D. Typhoid Fever, by S. K. Jackson, M.D. The Diagnosis of Tumors of the Anterior Mediastinum, by James C. Wilson, M.D., of Philadelphia. New Theory and Instrument of Diagnosis, by S. G. Ayres, M.D.

Section on Obstetrics: On the Management and Rectification of the Child's Head in Difficult Cases of Occipito-posterior Presentations, by I. E. Taylor, M.D., of New York. A Thousand Cases of Labor in Private Practice, and the Deductions to be Made from the Same, by W. M. Findley, M.D., of Pennsylvania. Causes and Prevention of Lacerations of the Female Sexual Organs, by S. D. Gross, M.D., of Phila. Malformation of the Female Sexual Organs Resulting from Arrest of Development, by B. B. Browne, M.D., of Maryland. Sudden Death in Labor and Childbed, by W. T. Lusk, M.D., of New York. Subject to be announced, by Robert Battey, M.D., of Ga.

Section on Surgery: A Case of Chronic Serous Synovitis of Knee, with Enormous Communicating Popliteal Bursa Extending to Tendo-Achillis, by T. F. Pruitt, M.D., of Missouri. Subject to be announced, by A. McLane Tiffany, M.D., of Maryland. Subject to be announced, by J. E. Owens, M.D., of Ill. Urethrotomia Lithotriptica, by M. Schuppert, M.D., of Louisiana. Treatment of an Obstinate Case of Club-foot, by E. H. Bradford, M.D., of Mass. Transfusion, by J. C. Hutchison, M.D., of Brooklyn. Entrance of Air into the Veins as a Secondary Cause of Death, by George S. Porter, M.D., of Conn.

Section on Ophthalmology, Otology, and Laryngology: Naso-pharyngeal Fibromata, by E. Fletcher Ingals, M.D., of Illinois. Observations on the Effects of Chronic Poisoning on the Nose and Adjacent Cavities, by J. N. Mackenzie, M.D., of Baltimore. Some of the Physical Causes of Asthma, by E. Cutter, M.D. A Simple Device for the Destruction and Removal of Tumors in the Nasopharynx, by J. R. Upler, M.D., of Maryland.

Section on Diseases of Children: Bright's Disease of Malarial Origin, by I. E. Atkinson, M.D., of Maryland. Clinical Observations in Rôtheln, by William A. Edwards, M.D., of Pennsylvania. Therapeutics of Infancy, by William Perry, M.D., of New Jersey. Practical Suggestions on the Treatment of the Malignant Forms of Scarlet Fever, by Bedford Brown, M.D., of Virginia.

Section on Oral and Dental Surgery: Overdraft of Nervous or Vital Power, as Affecting General and Special Health, by Jacob L. Williams, M.D., of Massachusetts. Periodic Hemorrhage from the Gums, Associated with Pyorrhœa Alveolaris, the Result of Amenorrhœa, by W. Wallport, M.D., of Illinois.

FRIDAY, MAY 9TH. GENERAL SESSION.

Concluding Report of Committee on Nominations.

Address of the Chairman of the Section on Ophthalmology, Otology, and Laryngology, Dr. J. F. Chisolm, of Baltimore.

Address of the Chairman of the Section on Diseases of Children, Dr. Wm. Lee, of Baltimore.

Miscellaneous Business. Adjournment.

Entertainments.—The evenings will be occupied by a reception by the President of the United States, a reception by the medical profession of Washington, and several card receptions at private residences.

MEDICAL MATTERS IN CONGRESS. BUREAU OF LABOR AND STATISTICS.—The bill to establish and maintain a "Bureau of Labor and Statistics," which passed the House on the 21st inst. after considerable discussion by a vote of 183 ayes to 19 nays, provides for obtaining "the number and ages of children, nature of their occupation, the effect of different kinds of labor on their growth, development and health; the sanitary, educational, social and moral condition of laborers; the average duration of life; accidents incident to employment; insanity; epidemics; factory, mill, mine, and dwelling inspections; and the condition of tenement houses for operatives and the rental thereof."

ADULTERATION OF FOOD AND DRUGS.—A resolution, introduced on the 21st inst. by Mr. Beach, of New York, Chairman of the Public Health Committee of the House, authorizing the Committee to "inquire into the extent and character of the Adulteration of Food and Drugs imported into the United States, or exported therefrom," brought on an animated discussion between the chairman and Mr. Mills, of Texas. The resolution was finally defeated.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR.—A joint resolution introduced by Mr. Scales, of North Carolina, on the 21st inst. was agreed to, authorizing the Public Printer to print such number of copies of the *Medical and Surgical History of the Rebellion* and the *Rebellion Record* as he may receive orders for, accompanied by the cost price of the publication and ten per cent. additional, when such orders are sufficient to justify the expense of putting the plates to press. The tenth census and compendium were also included in the above resolution.

THE EMPLOYMENT OF DIFFERENT SCHOOLS OF MEDICINE IN THE GOVERNMENT SERVICE.—The homœopaths flooded the Senate on the 21st inst. with petitions and memorials praying the passage of Senate bill 1223, re-

quiring the Employment of Different Schools of Medicine in the Government Service.

Mr. McPherson, of New Jersey, explained the petition presented by him to mean that all grades of physicians and all classes, as allopathic, homœopathic, etc., should be made equal before the law in the Government Service of the United States. Petitions to the above effect were presented by Mr. Cameron of Wisconsin, Mr. Hawley, of Connecticut (whose petition was headed by Ex-Governor Wm. T. Minor, and signed by 117 others), by Mr. Cullom, of Illinois, who presented sundry petitions of citizens of Chicago and other cities of Illinois, Iowa, and Minnesota, by Mr. Harrison, of Indiana, and Mr. Cockrell, of Missouri. The latter gentleman also presented a memorial from the faculty and students of the Homœopathic Medical College of Missouri, protesting against the discrimination that is made in favor of one class of physicians alone in Government employment in all the offices except the Pension Office, and recommending the passage of the bill referred to above. All the petitions were referred to the Committee on Civil Service and Retrenchment.

INTRODUCTION OF INFECTIOUS DISEASES.—Mr. Palmer, of Michigan, presented resolutions of the State Board of Health of Michigan favoring legislation for the prevention of the introduction of infectious diseases into the United States, which was referred to the Committee on Epidemic Diseases.

THE SEVENTH REPORT OF THE GERMAN CHOLERA COMMISSION.—DR. KOCH, in his seventh report, dated Calcutta, March 4, and published in the *Deutsche medicinische Wochenschrift* of April 3, says that it is a surprising fact that the cholera, in its endemic sway, was very often confined to fixed localities, and it was at the same time evident that it was epidemic to a certain extent. Especially frequent were these small localized epidemics in the vicinity of the so-called tanks (these tanks, from which water is used for almost every purpose, are extremely numerous over the whole of Bengal). It is easily understood that, the water, being often left in the tanks after being used, becomes foul and is entirely unfit for use. It very often happens, also, that the latrines, if contrivances of the most primitive kind can be so called, are built on the banks of these tanks, and their contents find their way into the tanks, while the banks serve as repositories for every kind of filth and especially for human fecal matters. The tanks contain, therefore, as a rule, very filthy water, and it is under those circumstances accountable that the resident physicians should seek to establish a relation between an epidemic of cholera near such a tank, and the bad quality of the tank-water. These tank epidemics are not at all infrequent, and every physician who has a large experience with cholera knows of a greater or less number of examples. On this account I have from the beginning directed my attention to this point, and have requested the sanitary commissioner to inform me if any such epidemic should occur near Calcutta. Such a case occurred during the past week. At Saheb Bagau, near Calcutta, there were, during a few days, an unusual number of cases of cholera. The cases were confined to the immediate vicinity of one tank around which a few hundred persons lived, and there were seventeen fatal cases;

whilst at a distance from the tank and in the whole surrounding police district there were no cases.

It is noteworthy that this same place was visited with cholera last year. At the beginning and during the course of the epidemic, the Commission made careful examinations, and found that the tank-water was used, in the usual manner, for bathing, washing, and drinking purposes, and that the soiled clothes of the cholera patients were cleansed in the tank. A number of examinations were made of water from different parts of the tank, and at different times, and investigated by the aid of gelatine cultures; cholera bacilli were found in tolerably large numbers in the first examinations. Later, when the epidemic was at an end, other examinations were made, and very few cholera bacilli were found in one tank only, and that in an especially filthy place. When it is considered that many examinations of tank-water, sewage, river-water, and various specimens of dirty water were made, and cholera bacilli were found only in a tank around which cholera was raging, these results must be regarded as most important. It seems established that the water in the tank was infected by cholera-washings which contained cholera bacilli in large numbers; further, it was shown that the dwellers around the tank used this infected water for house purposes and drinking-water. This furnishes, in a degree, the proof, which could not be obtained by experiments on animals, that the specific cholera bacilli are the cause of the disease.

This is one way, then, in which the cholera poison gets into the human system, and I do not doubt that in other similar cases the proof of the cholera bacilli in the water or other vehicle of the infective principle will be established.

Since my last report twenty cholera cadavers and the dejecta of eleven cases have been examined, which gives a total, of the examinations thus far made in India, of forty-two cholera cadavers, and twenty-eight cholera patients. These last cases have given no new results; they were precisely similar to the former.

Experiments have been made as to the influence of various substances, such as corrosive sublimate, carbolic acid, and other disinfectants on the development of the cholera bacilli in culture fluids, and also as to the behavior of the bacilli in carbonic acid gas and when excluded from the air. Experiments were also made with a view of discovering a permanent form (Dauerform) of the cholera bacillus, but so far nothing of the kind has been found. The single possibility, of causing the cholera bacilli to retain their viability for a long time, consists in their being preserved before becoming dry. In fluids they remain capable of development for a week, and everything seems to show that if they have only remained in a damp place and get into the human system they become active.

Further observations on this subject have now become very difficult on account of the hot weather. Last week the temperature was so great that it was only with the greatest difficulty that work could be carried on in the laboratory, and nothing can now be done except to end the work.

THE STATE MEDICAL SOCIETY OF ARKANSAS will hold its ninth annual session at Little Rock, on Wednesday, April 30th, and the two following days.